01111 5-2510-200-15

TM 5-2510-200-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, FIELD AND DEPOT MAINTENANCE MANUAL FOR

BODY, STAKE: COMPONENT OF TRUCK BRIDGING, FSN 2320-200-1682 (ALL MAKES AND MODELS) FOR MOUNTING ON ORD M-139 CHASSIS, (FSN 2510-510-5191)

This copy is a reprint which includes current pages from Change 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY

JUNE 1959

AGO 6085A—Jun

SAFETY PRECAUTIONS

llow any person other than the authorized personnel to ride on the equipment.

metal free of grease, oil, snow, and ice. Keep the ladders and the handholds free of ice.

the snatch block is secured, preferably before loading material.

he racks are locked in position before moving the truck.

the winch cables are properly secured before operating the winches.

AGO 6035A

GPO 809—000—1

TECHNICAL MANUAL

Operator, Organizational, Field, and Depot Maintenance Manual

BODY, STAKE: COMPONENT OF TRUCK BRIDGING, FSN 2320–200–1682 (ALL MAKES AND MODELS) FOR MOUNTING ON ORD M–139 CHASSIS, (FSN 2510–510–5191)

TM 5–2510–200–15
CHANGES No. 1

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., *28 January 1963*

TM 5–2510–200–15, 25 May 1959, is changed as follows:

Page 1, chapter 3, section III.

In paragraph column delete "36" and substitute "35."

Page 2, paragraph 1.

c. (Superseded) Request any recommendations for changes, additions, deletions, and other corrections for the improvement of this manual be forwarded by letter to the Commanding officer, U. S. Army Mobility Support Center, ATTN: SMOMS–MS, P. O. Box 119, Columbus 16, Ohio.

2. Record and Report Forms

(Superseded)

DA Form 2258	Depreservation Guide of Engineer Equipment.

For other record and report forms applicable to the maintenance of this equipment, refer to TM 38–750.

Note. Applicable forms, excluding standard Form 46 which is carried by the operator, will be kept in a canvas bag mounted on the equipment.

Page 13.

Paragraph 11*b*.(1), line 2.
Delete "36" and substitute "35."
Par. 12*a*. line 2.
Delete "36" and substitute "35."

Section III. PREVENTIVE MAINTENANCE SERVICES

(Superseded)

33. General

To insure that the stake body is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed and described in paragraphs 34 and 35. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the unit shall be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment if operation were continued. All deficiencies and shortcomings will be recorded, together with the corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Work-Sheet), at the earliest possible opportunity.

34. Daily Preventive Maintenance Services

Figure 13.1 contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator. Daily services retain the same item numbers used in quarterly preventive maintenance services. Therefore, daily preventive maintenance services may not be numbered consecutively but should be performed in the numerical sequence as shown to insure complete coverage. Refer to figure 13.1 for the daily preventive maintenance services.

35. Quarterly Preventive Maintenance Services

a. Figure 13.2 contains an illustrated tabulated listing of preventive maintenance services which must be performed by Organizational Maintenance personnel at quarterly intervals. A quarterly interval is equal to 3 calendar months or 250 hours of operation, whichever occurs first.

b. The item numbers are listed consecutively and indicate the sequence of minimum requirements. Refer to figure 13.2 for the quarterly preventive maintenance services.

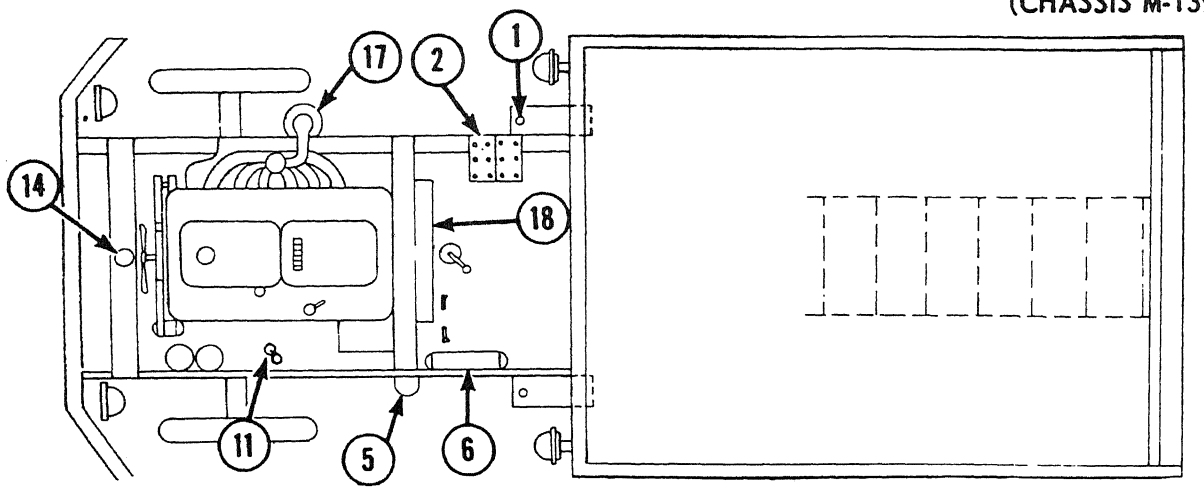
PREVENTIVE MAINTENANCE SERVICES

DAILY

TM 5-2510-200-15

STAKE BODY ON (CHASSIS M-139)

ALL MAKES AND MODELS



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR. REF
1	FUEL TANK. Check fuel level.	
2	BATTERIES. Inspect cables by hand for tightness. Inspect for cracks, insecure mounting, leaks, and corrosion. Fill to 3/4 inch above the plates. In freezing weather run the engine a minimum of one hour after adding water. Clean vent holes in filler caps before installing. (Weekly)	
5	FUEL FILTER. Drain and clean. (Weekly)	
6	AIR RESERVOIRS. Drain condensate.	
11	DIPSTICK. Check oil level. Change or add oil to FULL mark.	
14	RADIATOR. Check coolant level. Proper level is 2 inches below filler neck.	
17	AIR CLEANER. Check oil level. Clean cup and add oil to OIL LEVEL mark. (Weekly)	

Figure 13.1. (Added) *Daily preventive maintenance services.*

ITEM		PAR. REF
18	CONTROLS AND INSTRUMENTS. Inspect the controls and instruments for damage and insecure mounting. With the unit operating inspect for improper operation. Normal operating readings for instruments should be as follows: Oil pressure gage - 15 psi, Water temperature gage - 160°-180°F; Ammeter - in charge area; Air pressure 110-115 psi.	
	NOTE 1. LUBRICATION. During lubrication observe all applicable items for secure mounting and obvious defects. Correct or report all noticed defects.	
	NOTE 2. OPERATION. During operation notice if unit has normal power and acceleration in each speed range.	
	NOTE 3. ADJUSTMENTS. Make all adjustments found necessary during operation.	
	NOTE 4. RECORDS. Make appropriate entries on applicable forms used in inspecting, servicing, and repairing the equipment; sign the form and turn in to the proper authority.	
	NOTE 5. FIRE EXTINGUISHER. Check for broken seal	

MSC 2510-200-15/13.1

Figure 13.1—Continued.

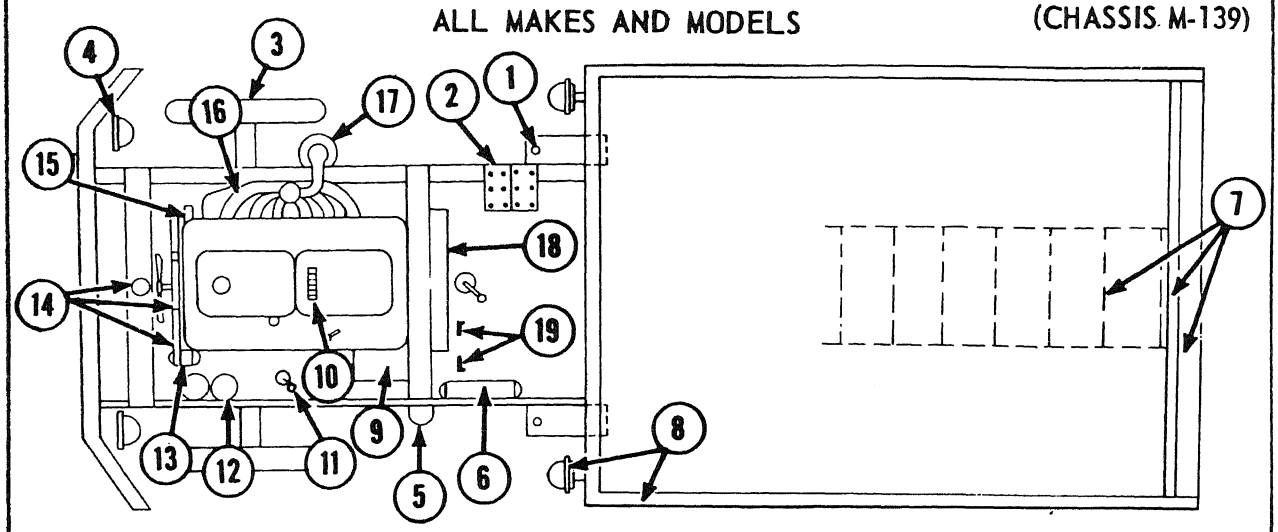
PREVENTIVE MAINTENANCE SERVICES

QUARTERLY

TM 5-2510-200-15

STAKE BODY
ON
(CHASSIS M-139)

ALL MAKES AND MODELS



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR. REF
1	FUEL TANK. Inspect for leaks and insecure mounting. Check fuel level. Service strainer.	
2	BATTERIES. Inspect cables by hand for tightness. Inspect for cracks, insecure mounting, leaks, and corrosion. Fill to 3/4 inch above the plates. In freezing weather run the engine a minimum of one hour after adding water. Clean vent holes in filler caps before installing.	
3	TIRES. Inspect for cuts, breaks, and deterioration. Check pressure. Correct pressure is 70 psi.	
4	LIGHTS. Inspect for insecure connections and mounting. See that they are aimed properly.	
5	FUEL FILTER. Inspect for insecure mounting. Drain and clean.	
6	AIR RESERVOIRS. Inspect for leaks and insecure mounting. Drain condensate.	

Figure 13.2. (Added) ***Quarterly preventive maintenance services.***

ITEM		PAR. REF
7	ROLLER, WINCH, AND LADDER. Inspect for damage, insecure mounting, and proper operation.	
8	FLOODLIGHTS AND STAKE BODY. Inspect lights for insecure connections and mounting. Inspect body for damage.	
9	STARTER. Inspect for insecure cable connections and mounting.	
10	CRANKCASE BREATHERS. Inspect crankcase ventilators, governor, carburetor breathers for insecure mounting. Clean.	
11	DIPSTICK. Check oil level. Change or add oil to FULL mark.	
12	OIL FILTER. Inspect for leaks and insecure mounting.	
13	GENERATOR AND REGULATOR. Inspect for insecure cable connections and mounting.	
14	RADIATOR, WATER PUMP, AND BELTS. Check coolant level. Inspect for leaks. Proper coolant level is 2 inches below filler neck. Inspect belts for proper adjustment, wear, fraying, and damage. Correct belt deflection is 1/4 to 1/2 inch midway between crankshaft and generator pulleys.	
15	AIR COMPRESSOR STRAINERS. Inspect for insecure mounting. Clean.	
16	CYLINDER HEADS, MANIFOLDS, AND MUFFLER. Inspect for leaks and insecure mounting. Cylinder-head bolt torque is 110 foot-pounds.	
17	AIR CLEANER. Inspect for insecure mounting, contaminated oil, and level of oil. Clean cup and add oil to OIL LEVEL mark.	
18	CONTROLS AND INSTRUMENTS. Inspect the controls and instruments for damage and insecure mounting. With the unit operating inspect for improper operation. Normal operating readings for instruments should be as follows: Oil pressure gage - 15 psi, Water temperature gage - 160°-180°F; Ammeter - in charge area; Air pressure 110-115 psi.	

Figure 13.2—Continued.

ITEM		PAR. REF
19	CLUTCH AND BRAKES. Inspect for proper operation.	
	NOTE 1. LUBRICATION. During lubrication observe all applicable items for insecure mounting and obvious defects. Correct or report all obvious defects.	
	NOTE 2. FIRE EXTINGUISHER. Inspect for broken seal. Check for full charge. Correct or report noticed defects.	
	NOTE 3. OPERATIONAL TEST. During operation observe for any unusual noise or vibration.	
	NOTE 4. ADJUSTMENTS. Make all necessary adjustments during operational test.	

MSC 2510-200-15/13.2

Figure 13.2—Continued.

Page 55, paragraph 96*b*.(1), line 2. Delete "36" and substitute "35."

Page 56.

Paragraph 99*b*.

Line 3. Delete "30" and substitute "90."

Paragraph 99.

c. Worksheet and Preventive Maintenance (Superseded). For all deficiencies together with corrective action taken, DA Form 2404 will be executed on each major item of equipment, and each group of minor items of equipment when equipment is initially placed into limited storage and every 90 days.

Page 59, paragraph 4. After TM 9–8028 insert:

TM 38–750	The Army Equipment Records System and Procedures.

APPENDIX II
MAINTENANCE ALLOCATION CHART
(Superseded)

Section I. INTRODUCTION

1. General

This appendix contains explanations of all maintenance and repair functions authorized the various echelons. Section II contains the maintenance allocation chart.

2. Maintenance

Maintenance is any action taken to keep materiel in a serviceable condition or to restore it to serviceability when it is unserviceable. Maintenance of materiel includes the following:

a. Service. To clean, preserve, and replenish fuel and lubricants.

b. Adjust. To regulate periodically to prevent malfunction.

c. Inspect. To verify serviceability and detect incipient electrical or mechanical failure by scrutiny.

d. Test. To verify serviceability and detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, and the like.

e. Replace. To substitute serviceable assemblies, subassemblies and parts for unserviceable components.

f. Repair. To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes, but is not limited to, inspecting, cleaning, preserving, adjusting, replacing, welding, riveting, and straightening.

g. Aline. To adjust two or more components of an electrical system so that their functions are properly synchronized.

h. Calibrate. To determine, check, or rectify the graduation of an instrument, weapon or weapons system, or components of a weapons system.

i. Overhaul. To restore an item to completely serviceable condition as prescribed by serviceability standards developed and published by heads of technical services. This is accomplished through employment of the technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.

3. Explanation of Columns

a. Functional Group. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes (obtained from the Corps of Engineers Functional Grouping Indexes) are listed on the MAC in the appropriate numerical sequence. These indexes are normally set up in accordance with their function and proximity to each other.

b. Components and Related Operation. This column contains the functional grouping index heading, subgroup headings, and a brief description of the part starting with the noun name. It also designates the operations to be performed, such as service, adjust, inspect, test, replace, repair, and overhaul.

c. Echelons of Maintenance. This column contains the various echelons of maintenance by number designation. An "*X*" placed in the appropriate echelon column in line with an indicated maintenance function authorizes that echelon to perform the function. The "*X*" indicates the lowest echelon responsible for performing the function, but does not necessarily indicate repair parts stockage at that level. Higher echelons are authorized to perform the indicated functions of lower echelons.

d. Remarks. This column lists specific maintenance functions, special tools, cross-references, instructions, and the like pertinent to the operation being performed.

Maintenance Allocation Chart

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
06	ELECTRICAL SYSTEM						
0609	LIGHTS						
	Lights						
	Replace		X				

Functional group	Components and related operation	Echelons of maintenance 1	2	3	4	5	Remarks
	Lens; Doors; Lamps						
	Replace		X				
0613	CHASSIS WIRING HARNESS						
	Harness, Wiring						
	Repair		X				
15	FRAME						
1501	FRAME ASSEMBLY						
	Roller, Rear						
	Service	X					
	Repair			X			
1504	SPARE WHEEL CARRIER AND TIRE LOCK						
	Carrier						
	Repair		X				
17	BODY						
1700	BODY						
	Fenders; Shields						
	Replace		X				
1708	BOXES						
	Box, Tool						
	Replace		X				
1710	CARGO BODY						
	Body						
	Repair		X				
	Racks						
	Replace	X					
20	WINCHES						
2001	WINCH ASSEMBLY						
	Winch						
	Service	X					
	Repair		X				
	Handles						
	Replace	X					
	Block, Snatch						
	Service	X					
	Repair		X				
	Cables, Winch						
	Replace	X					
22	MISCELLANEOUS BODY AND ACCESSORY ITEMS						
2202	ACCESSORY ITEMS						
	Accessories, Mounted						
	Replace		X				
2210	DATA PLATES						
	Plates, Data						
	Replace			X			
	Plates, Instruction						
	Replace		X				
26	ACCESSORIES, PUBLICATIONS AND TOOLS						
2602	ACCESSORIES						
	Accessories, Unmounted						
	Replace	X					
2603	COMMON TOOL						
	Tools, Common						
	Replace	X					
2605	PUBLICATIONS						
	Publications						
	Replace	X					

By Order of the Secretary of the Army:

EARLE G. WHEELER,
General, United States Army,
Chief of Staff.

Official:

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USA AD CD Agcy (2)
USA SPWAR CD Agcy (2)
USA Avn CD Agcy (2)
OS Maj Comd (5) except
  USASETAF (2)
  USARJ (10)
MDW (1)
Armies (2)
Corps (2)
Div (2)
Engr Bde (1)
Svc Colleges (2)
Br Svc Sch (2) except
  USAES (100)
USMA (2)
GENDEP (OS) (2)
Engr Sec, GENDEP (10)
A Dep (Engr) (10)
Trans Tml Comd (2)
Army Tml (1)
OSA (2)
Dist Engr (2) except
  Buffalo, Chicago,
  Alaska, Detroit,
  Los Angeles, New Orleans,
  New York, Louisville,
  Pittsburgh, San Francisco,
  Omaha, Seattle,
  Kansas City, Baltimore,
  Ft Worth, Eastern Ocean,
  Philadelphia, Rock Island,
  St Louis, St Paul (1)
Div Engr (2) except
  Lower Miss Valley (none)
  North Central (none)
Engr Dep Maint Shop (2)
Engr Fld Maint Shop (2)
USAERDL (3)
Engr Cen (5)
AMS (3)
Def Log Svc Cen (1)
Chicago Proc Ofc (10)
USA Mbl Spt Cen (36)
ESCO (10)
Fld Comd, DASA (8)
USAREURCOMZ (2)
USAREUR Engr Sup Con Agcy (10)
USAREUR Engr Proc Cen (2)
MAAG (1)
USA Corps (1)
JBUSMC (1)
Units org under fol TOE:
  (2 copies UNOINDC)

5–5	5–148
5–6	5–155
5–15	5–237 (5)
5–16	5–262 (5)
5–48	5–267 (1)
5–54	5–278 (5)
5–78	5–279
5–114	5–500 (GK)
5–115	7
5–117	17
5–129	37
5–145	

NG: State AG (3).
USAR: Same as active army except allowance is one copy to each unit.
For explanation of abbreviations used, see AR 320–50.

*U.S. GOVERNEMNT PRINTING OFFICE: 1983-381-302/2564-Region 4.

TECHNICAL MANUAL
No. 5–2510–200–15

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., *25 May 1959*

BODY, STAKE: COMPONENT OF TRUCK BRIDGING, FSN 2320–200–1682 (ALL MAKES AND MODELS) FOR MOUNTING ON ORD M–139 CHASSIS, (FSN 2510–510–5191)

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* This manual supersedes TM 5–8061, 20 May 1953, and TM 5–8063, 15 August 1952.

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. These instructions cover the stake body used for transporting military bridging equipment. This manual covers all makes and models of the body built under Government specifications and design. Information is provided on the operation, organizational maintenance, field, and depot maintenance of this equipment.

b. Appendix I is a list of reference publications applicable to this equipment; appendix II contains the Maintenance Allocation Chart; and appendix III lists the basic issue items authorized for the use of the operator or user of this equipment. The list of repair parts is published separately as TM 5–2510–200–15P.

c. Request any recommendations for changes, additions, deletions, and other corrections for the improvement of this manual be forwarded by letter to the Commanding General, U. S. Army Engineer Maintenance Center, Corps of Engineers, P. O. Box 119, Columbus 16, Ohio, ATTN: ENCJM.

2. Record and Report Forms

The following record and report forms are to be used by the personnel of all five echelons of maintenance for recording and reporting maintenance operations. Forms are listed only once, regardless of how many echelons they may apply to, because all forms and information applying to lower echelons are available to the higher echelons.

a. Organizational Maintenance.

(1) DA Form 5–22, Unserviceable Part Identification Tag.

(2) DA Form 5–73, Record of Engineer Equipment Requiring Repair Parts Support.

(3) DA Form 5–73A, Change to Record of Engineer Equipment Requiring Repair Parts Support.

(4) DA Form 9–79, Parts Requisition.

(5) DA Form 285, Accident, Report of Individual Accident.

(6) DA Form 460, Preventive Maintenance Roster.

(7) DA Form 464, Work Sheet for Preventive Maintenance and Technical Inspection of Engineer Equipment.

(8) DA Form 468, Unsatisfactory Equipment Report.

(9) DA Form 478, Organizational Equipment File.

(10) DA Form 811, Work Request and Job Order.

(11) DA Form 1115, Property Turn-in Tag.

(12) DA Form 1543, Title Insert (Informal Accountability).

(13) DA Form 1546, Request for Issue or Turn-in.

(14) DD Form 6, Report of Damaged or Improper Shipment.

b. Field and/or Depot Maintenance.

(1) DA Form 5–13, Spot Check of Organizational Maintenance of Engineer Equipment.

(2) DA Form 5–14, Annual Technical Inspection Report of Engineer Equipment.

(3) DA Form 5–28, Base Maintenance Division Equipment Control Card (used in CONUS only).

(4) DA Form 5–29, Inspection Register (used in CONUS only).

(5) DA Form 5–30, Job Order Summary Card (used in CONUS only).

(6) DA Form 5–31, Shop Job Order Register (used in CONUS only).

(7) DA Form 9–80, Job Order File (envelope).
(8) DA Form 421, Stock Record Card.
(9) DA Form 828, Job Time Ticket.
(10) DA Form 829, Rejection Memorandum.
(11) DA Form 1510, Field Maintenance Program Performance.
(12) DA Form 1544, Due Out Release.

c. Depot Maintenance.

(1) DA Forms 14–115 and –155A, Purchase Request and Commitment.
(2) DA Form 1535, Depot Operations — Program Performance.
(3) DA Form 1535–1, Depot Operations—Program and Schedules.

d. Miscellaneous.

(1) DA Form 1734, Command Maintenance Inspection—Preventive Maintenance Records Checklist — Engineer Equipment.
(2) DA Form 1748, Command Maintenance Inspection — Shop Operations Checklist.
(3) DA Form 1749, Command Maintenance Inspection, Repair Parts—Supply Operations Checklist.

Section II. DESCRIPTION AND DATA

3. Description

The bridge transporting stake body (figs. 1 and 2) is a flat bed, stake-type body with removable side stake racks. It is designed for the purpose of handling and transporting bridging equipment. It is mounted on an Ordnance M139, 215-inch wheelbase, 5-ton chassis. Reference to "right" and "left" refer to a view of the body from the rear, looking toward it. Serial number ranges of the models of four manufacturers building this stake body are Hobbs, 933001 through 934000 and 930001 through 930880; Perfection, 1 through 1065, Metro Engineering 1 through 710; Gresham 1 through 450. All models are built to government specifications.

4. Identification

a. Corps of Engineers Identification Plate. This plate (A, fig. 3) is located on the left front corner of the body. It gives a short nomenclature, the weight, Federal Stock Number, manufacturer's name, model, and serial number, and Corps of Engineers contract number.

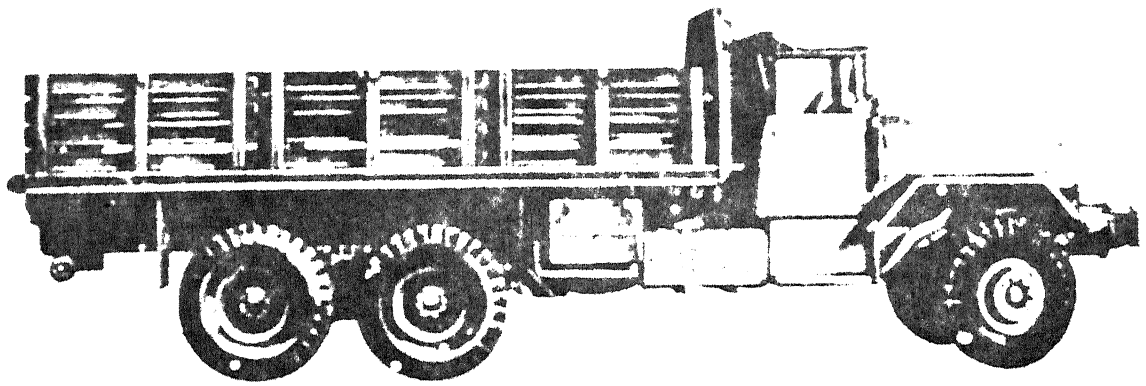


Figure 1. Stake body, truck mounted, right side view.

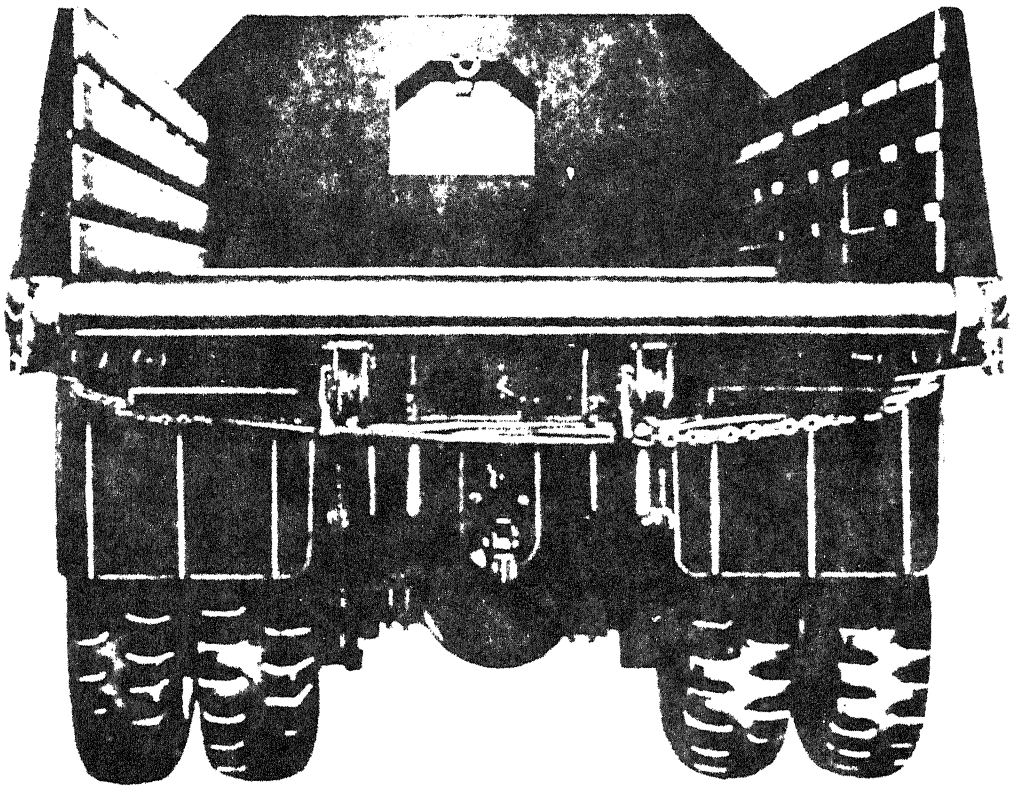


Figure 2. Stake body, truck mounted, rear view.

b. Transportation Data Plate. This plate (B, fig. 3) is located on the left front corner of the body. It gives the overall length, width, height, and the shipping cubage, weight, and tonnage of the body.

c. Manufacturer's Serial Number and Purchase Order Number Data Plate. This plate (C, fig. 3) is located on the left front corner of the body. It gives the purchase order number and the manufacturer's serial number.

5. Differences in Models

There are no differences in models. All models are built to the same Government specifications. Serial number ranges are listed in paragraph 3.

6. Tabulated Data

a. Winch Cables.

Side winch cables_____⅞ in. (inch) (es) x 19 ft (feet)
Rear winch cables_____⅞ in. x 25 ft

b. Lights and Wiring.

Floodlights_____24 volts
Clearance_____24 volts
Marker_____24 volts

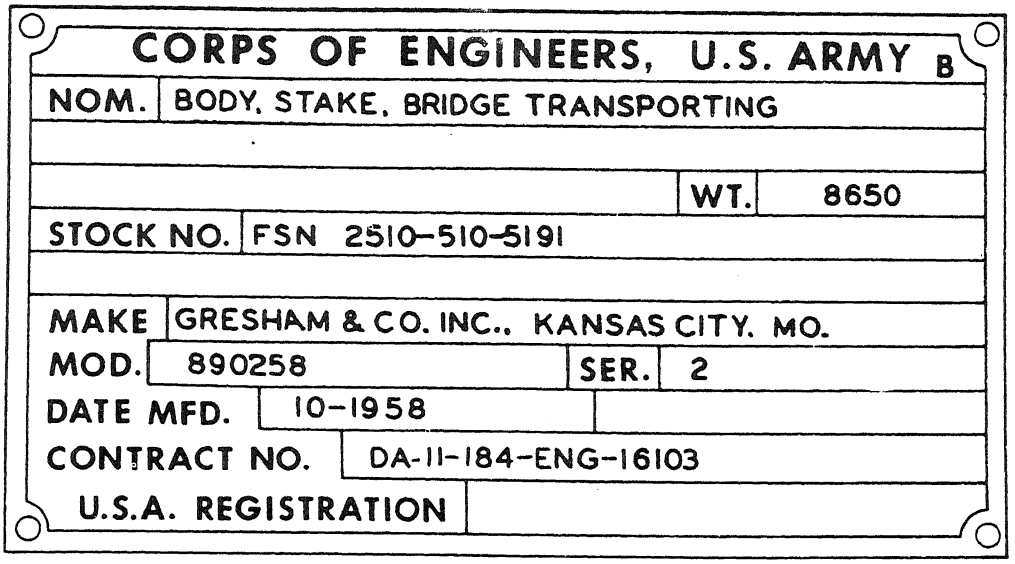
c. Loading Capacity.

Inside length_____18.25 ft
Inside width_____8.16 ft
Inside height_____2.5 ft
Cubage_____372.28 cu ft (cubic feet)

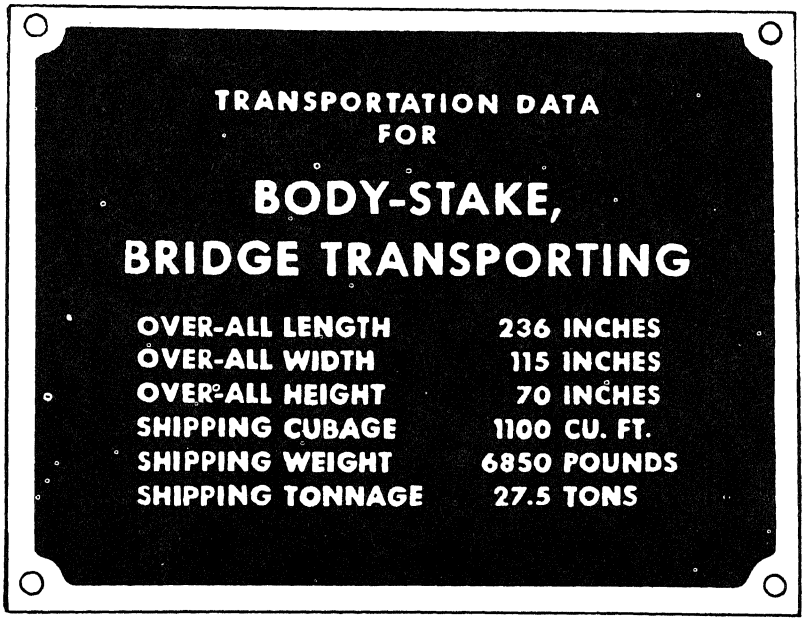
d. Dimensions and Weight.

Length overall_____273⅛ in.
Body length_____236 in.
Width overall_____115 in.
Height overall_____188¼ in.
Body height_____67½ in.
Total weight_____19,630 lb
Body weight_____6,850 lb
Shipping weight_____19,360

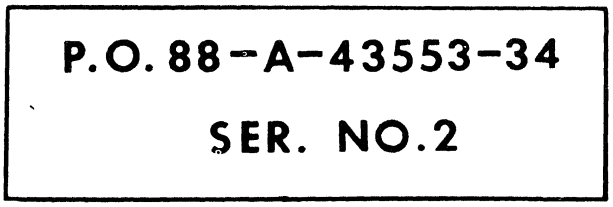
e. Time Standards. Time standards for normal removal, repair, and installation are given in table I.



A



B

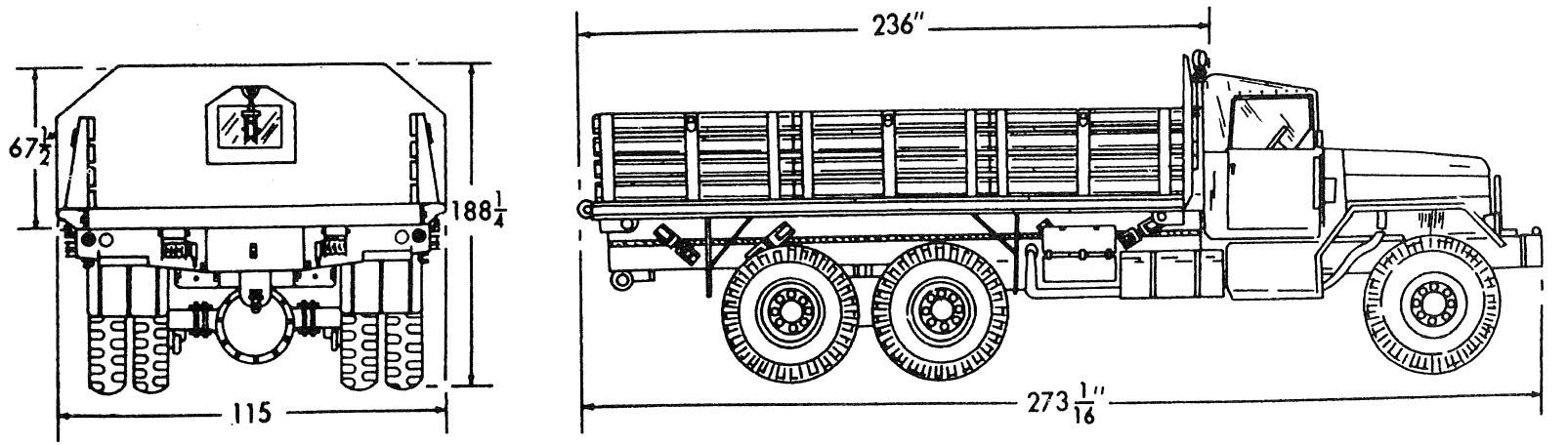


C

EMC 5-2510-200-15/3

A Corps of Engineers identification plate
B Transportation data plate
C Manufacturer's serial number and purchase order number data plate

Figure 3. Date plates.



EMC 5-2510-200-15/4

Figure 4. Shipping dimensions.

Table I. Time Standards

		Hours
a. Group 06—Electrical System:		
0609.1	Head, Tail and Marker, Lights	
	Marker lights, removal	0.1
	Marker lights, installation	0.2
	Marker lights, repair	0.3
0609.2	Additional Lights	
	Floodlights, removal	0.2
	Floodlights, installation	0.3
	Floodlights, repair	0.5
0613	Hull or Chassis Wiring, Harness	
	Hull or chassis wiring harness, removal	1.2
	Hull or chassis wiring harnes, installation	1.8
	Hull or chassis wiring harness, repair	1.5
b. Group 15—Frame:		
1501.3	Bumper, Guards, Rollers	
	Rear rollers, removal	0.8
	Rear rollers, installation	1.2
	Rear rollers, repair	2.0
1504	Spare Wheel Carrier and Tire Lock	
	Spare wheel carrier and tire lock, removal	0.4
	Spare wheel carrier and tire lock, installation	0.6
c. Group 17—Body; Cab; Hood; Hull:		
1701.1	Fenders, Sandshields, Running Boards	
	Sandshields, removal	0.4
	Sandshields, installation	0.6
	Sandshields, repair	1.0
1701.2	Mounting and Attaching Parts	
	Mounting and attaching parts, removal	0.8
	Mounting and attaching parts, installation	1.2
1708	Stowage Racks, Boxes, Straps	
	Stowage racks, boxes, straps, removal	0.4
	Stowage racks, boxes, straps, installation	0.6
	Stowage racks, boxes, straps, repair	1.0
1710	Cargo Body	
	Cargo body, removal	1.7
	Cargo body, installation	2.3
	Cargo body, repair	8.0
	Stake racks, removal	0.1
	Stake racks, installation	0.1
	Stake racks, repair	3.0
	Rack lock assembly, removal	0.2
	Rack lock assembly, installation	0.3
	Rack lock assembly, repair	1.0
d. Group 20—Hoist; Winches; Power Control Unit; Power Take-off:		
2001.1	Hoist or Winch Assembly	
	Hoist or winch assembly, removal (including brackets)	0.8
	Hoist or winch assembly, installation	1.2
	Hoist or winch assembly, repair	1.0
	Handles, removal	0.2
	Handles, installation	0.3
e. Group 22—Miscellaneous Body, Chassis Or Hull and Accessory Items:		
2001.2	Blocks, Cables, Sheaves	
	Snatch block, removal	0.4
	Snatch block, installation	0.6
	Sheave pin, removal	0.4
	Sheave pin, installation	0.6
	Cables, winch, fabricate	2.0

Table I. Time Standards—Continued

		Hours
2202	Accessory Items	
	Reflectors, removal	0.1
	Reflectors, installation	0.1
2210	Data Plates and Instruction Holders	
	Data plates and instruction holders, removal	0.3
	Data plates and instruction holders, installation	0.7
f. Group 26—Accessories, Publication, Test Equipment and Tools:		
2602.1	Accessories	
	Ladders, removal	0.2
	Ladders, installation	0.3

CHAPTER 2
OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF EQUIPMENT

7. Unloading of Equipment

a. General. The stake truck (1, fig. 5) may be driven or towed from the flatcar (4).

b. Unloading Ramp. If no permanent ramp is available for use, construct one as indicated in *c* below.

c. Ramp Construction.

(1) Use 6- x 6-inch timbers for constructing the ramp runners (1, fig. 6), and vertical supports (2).

(2) Secure the ramp runners (1) and vertical supports (2) with 2- x 4-inch cross supports (3).

(3) After the ramp is constructed, block the flatcar wheels on each side with 6- x 6-inch blocks (5).

d. Unloading by Towing.

(1) Remove the tie-down wires (3, fig. 5) from the flatcar (4) and the stake truck (1).

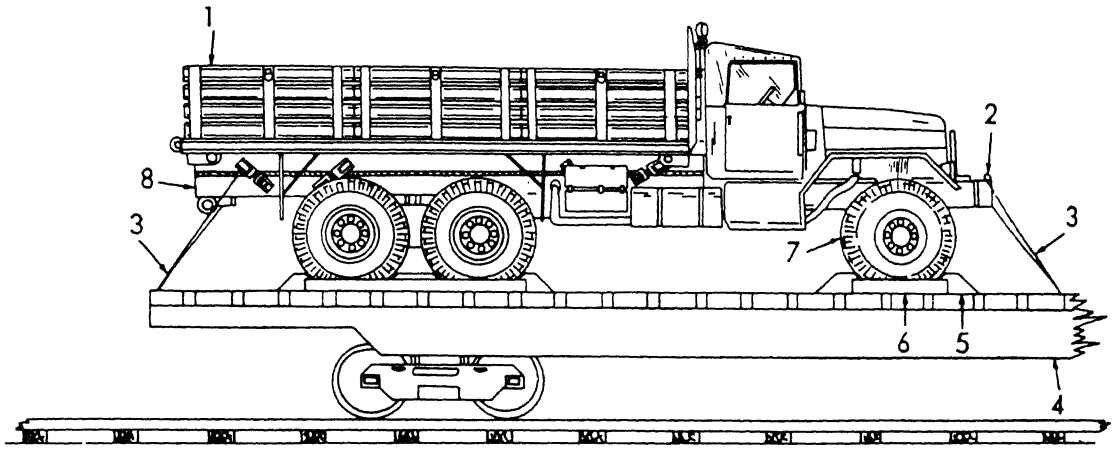
(2) Remove the wheel blocking (5, 6) from the flatcar (4).

(3) Hook a suitable towing cable from the towing vehicle to the stake truck.

Note. It is not necessary to start the engine to tow the truck off the flatcar. The hand operated emergency brake may be used to do any required braking.

(4) Inspect the tires to see if they are properly inflated before moving the truck.

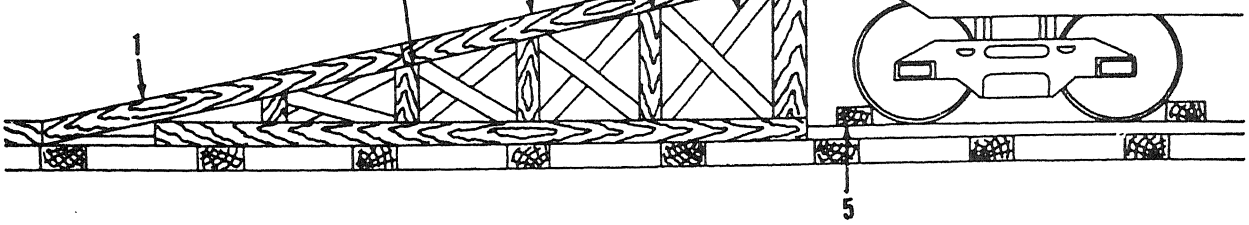
(5) Depress the clutch and position the gearshift lever in the lowest gear of



EMC 5-2510-200-15/5

1 Truck, stake
2 Lifting hooks, front
3 Tie-down wires (4 rqr)
4 Flatcar
5 Wheel blocking, front
6 Wheel blocking, side
7 Wheel, front
8 Lifting point, rear

Figure 5. Stake truck loaded for shipment.



EMC 5-3895-201-20/1

1 Runner plank, 6 x 6 in.
2 Vertical supports, 6 x 6 in.
3 Cross supports, 2 x 4 in.
4 Flatcar
5 Wheel blocking, 6 x 6 in.

Figure 6. Construction of unloading ramp.

the direction of travel. By releasing the clutch as necessary it will aid in braking the truck. If further braking is necessary use the emergency hand brake. Guide the truck off the flatcar down the ramp.

e. Unloading With a Lifting Device.

(1) Remove the tie-down wires (3, fig. 5) from the flatcar (4) and the stake truck (1) as instructed in *d* above.

(2) Remove the wheel blocking (5, 6) from the flatcar (4) as instructed in *d* above.

(3) Use a lifting device of sufficient capacity to lift the stake truck (1).

(4) Attach a cable of sufficient capacity under the rear of the lifting point (8, fig. 5) and another cable to the front lifting hooks (2).

(5) Lift and swing the stake truck clear of the flatcar. Lower the truck to the ground slowly. Remove the cables.

8. Unpacking of Accessories

a. General. New units are processed to meet military specifications and are shipped fully assembled, with the exception of the floodlight and the snatch block. The clearance lights, blackout lights, tail lights, and reflectors are sealed with tape. The floodlights and the snatch block are packed in the toolbox.

b. Procedure.

(1) Remove the snatch block from the toolbox.

(2) Remove the two floodlights from the toolbox.

(3) Remove the two winch handles from the toolbox.

9. Removal of Protective Material and Devices

a. Remove the tape from the reflectors, clearance lights, and tail lights.

b. Remove the protective barrier material and tape from the floodlights, winch handles, and the snatch block.

c. Remove all preservatives from the spare tire carrier, stake rack locks, ladders, and the winch assemblies.

d. Clean all items with a clean cloth dipped in an approved cleaning solvent.

e. Remove all loose packing material and wiping cloths from the unit.

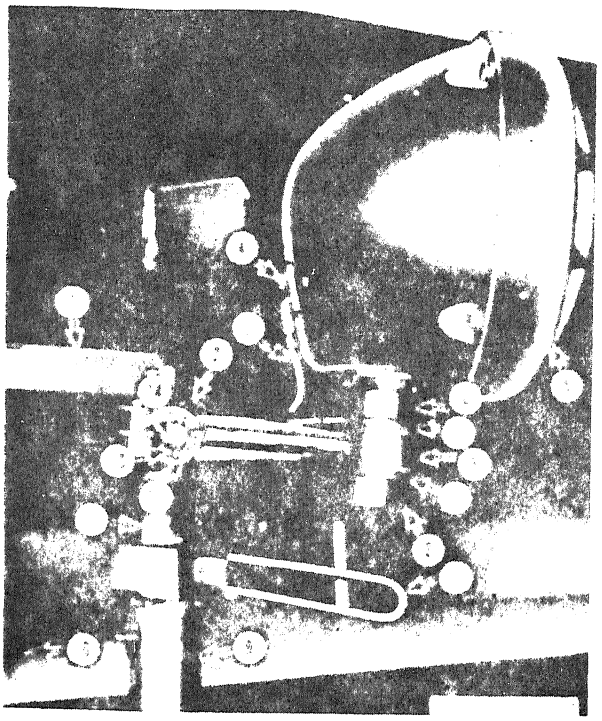
10. Installation of Separately Packed Components

a. General. The snatch block, the two winch handles and the two floodlights and the two ladders are the only separately packed items to be installed. They are placed in the toolbox and the stowage compartment.

b. Floodlight Assemblies.

(1) Install the nut (6, fig. 7) and the flat washer (7) in the floodlight assembly (5).

(2) Position the floodlight (5) through the lever (8) and the ground wire (2) Secure to the lever with the nut (6) and flat washer (7).



1 **Handle and bolt assembly (2 rqr)**
2 Ground wire, 14 gage, 8 ft lg
3 Wiring harness, floodlight
4 Screw, mach nɔ, No. 12–32 x ¼ in.
5 Floodlight assembly
6 Nut, plain, hex ⅝–18 (2 rqr)
7 Flat washer, ⅝ in. (2 rqr)
8 Lever
9 Bracket, light mounting
10 Body, stake, bridging
11 Support, floodlight
12 Flat washer, ½ in.
13 Nut, castellated, ½–20
14 Pin, cotter, ⅛ x 1⅛ in.

Figure 7. Floodlight assembly, installed view.

(3) Secure the wire (3) to the floodlight (5) with the screw (4).

(4) Repeat the above procedure to install the other floodlight.

c. Snatch Block Assembly.

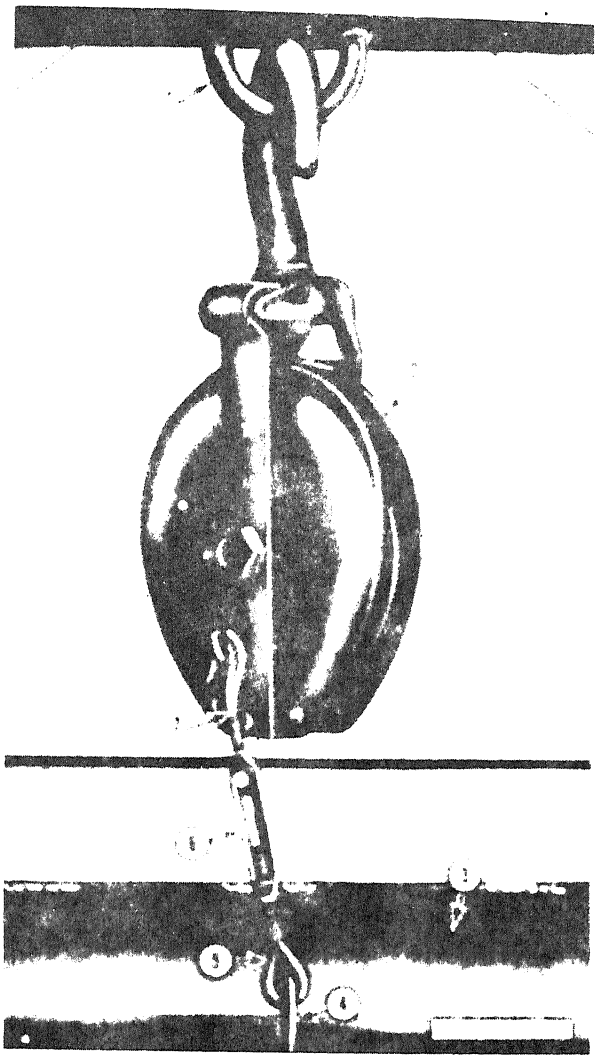
(1) Hook the snatch block hook in the support (1, fig. 8) in the window of the bulkhead (3).

(2) Hook the turnbuckle (7) to the snatch block (2).

(3) Turn the turnbuckle (6) counterclockwise until the snatch block (2) is secured.

d. Winch Handles.

(1) Insert the handle (9, fig. 9) in the



1 **Support, mounting**
2 Snatch block assembly
3 Bulkhead
4 Support, turnbuckle
5 **Eyebolt, turnbuckle**
6 Turnbuckle
7 Hook, turnbuckle

Figure 8. Snatch block, installed view.

ratchet lever (10) as far as possible. Aline the pin in the handle with the slots in the lever.

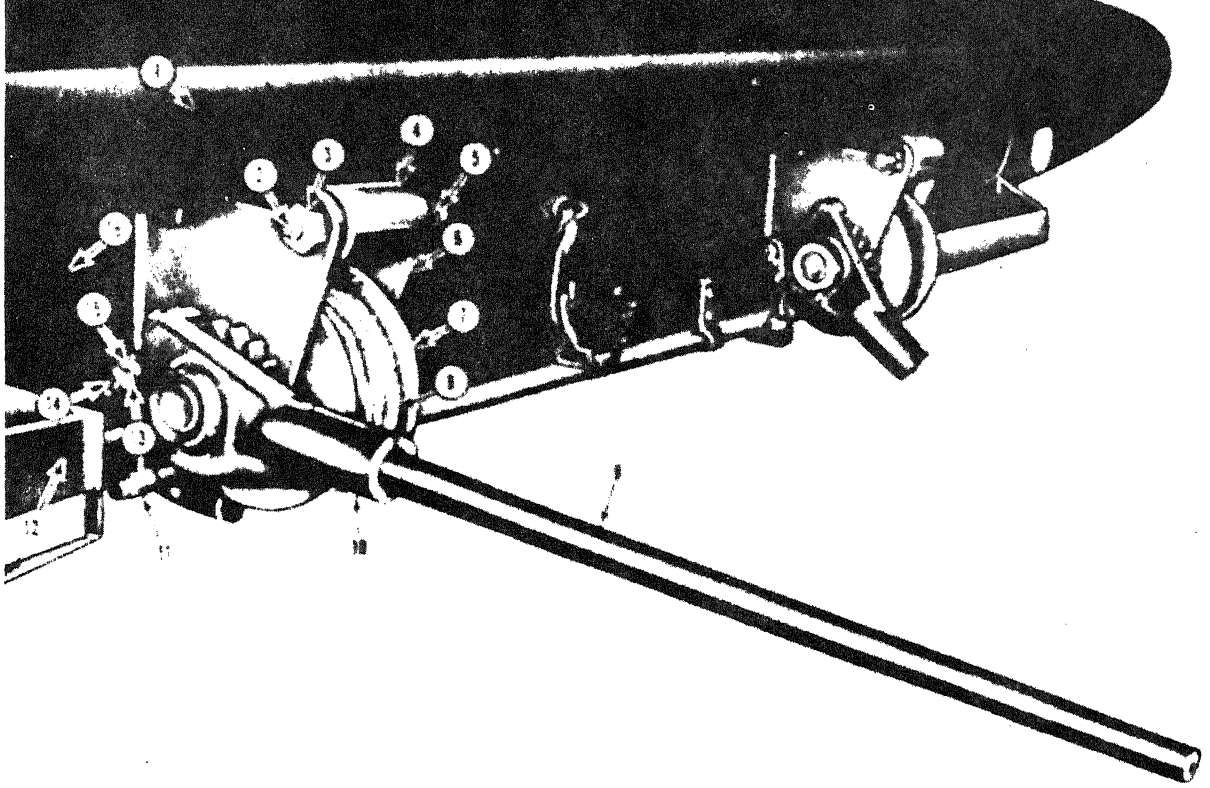
(2) Turn the handle (9) ¼ turn to the right to lock it in position.

(3) To remove the handle, turn it ¼ turn to the left and pull it from the ratchet lever (10).

Note. Always remove the winch handles and place them in the toolbox when moving the truck.

e. Side Rack Assemblies.

(1) Remove the pin (4, fig. 10).



1 Rear roller assembly
2 Fitting, lubrication, ⅛–27 (2 rqr)
3 Bolt internally relieved body, ¾–16 x 4¾ in. lg (2 rqr)
4 Roller, fair-lead guide (2 rqr)
5 Nut, castellated, ¾–16 (2 rqr)
6 Bracket winch
7 Drum cable, winch
8 Cable assembly, ⅜ x 25 ft, rear
9 Handle, winch
10 Lever, ratchet, rear
11 Pawl, ratchet, wheel
12 Support, ladder
13 Pin, cotter, ⅛ x 1 in.
14 Stud, pawl
15 Nut, castellated, ½–20
16 Stake body

Figure 9. Winch handle, installed view.

(2) Push down and in on the lever (5). Position the rack (1) in the stake body (3).

Note. Each rack has a female interlock on one end and a male interlock on the other end of top cross piece. When installing the rack, lift it high enough for the male interlock to slide in the female interlock.

(3) Repeat the above procedure until all the stake racks (1) are installed.

f. Ladder Assemblies.

(1) Remove the snap and chain assembly (5, fig. 11) from the hasp of the stowage compartment door assembly (7).

(2) Turn the latch (6) ¼ turn to the left and open the door (7).

(3) Remove the top ladder assembly (3, fig. 12) from the storage support (5).

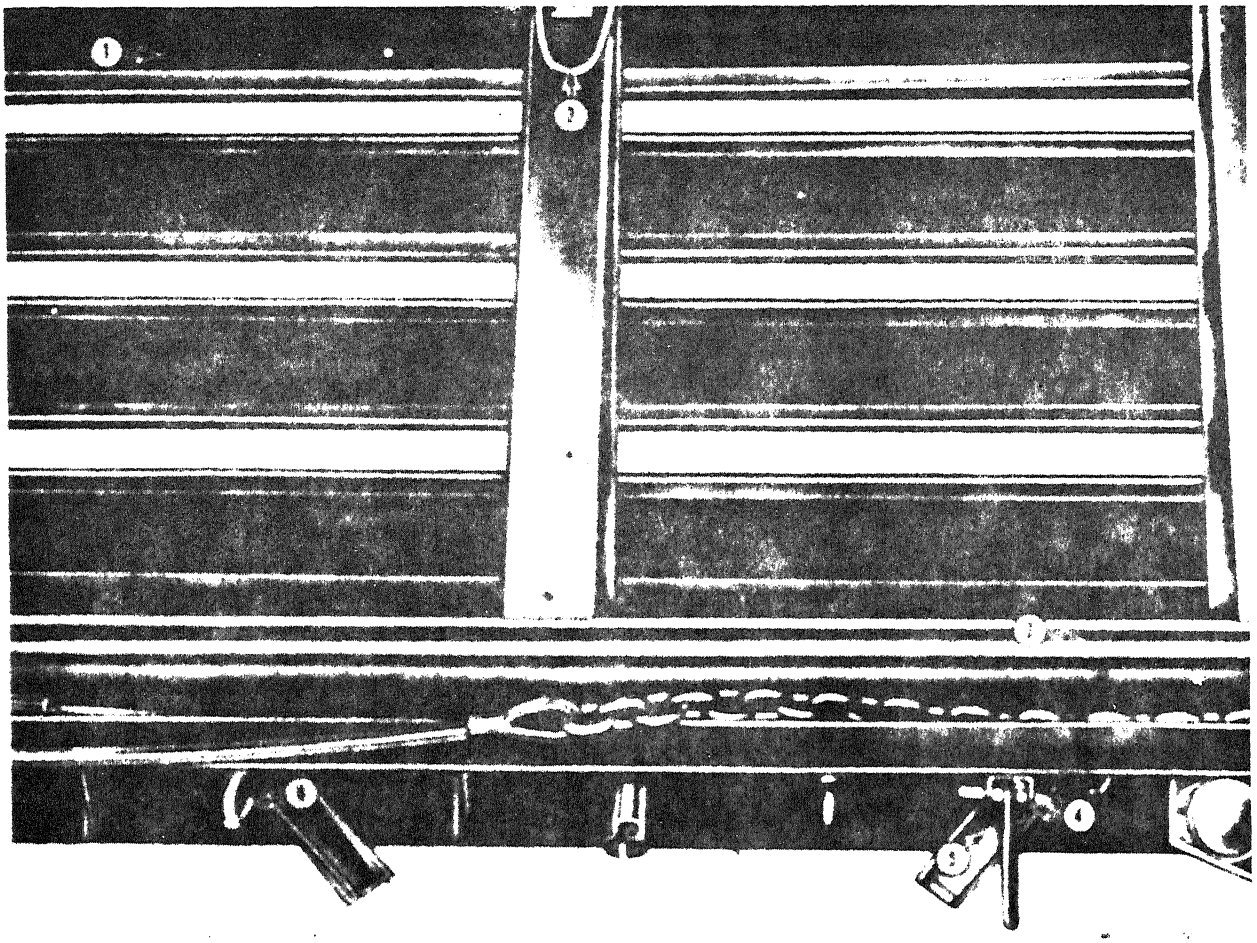
(4) Remove the bottom ladder assembly (3) from the storage support (5).

(5) Position the two ladders on the two ladder supports (12, fig. 9).

Note. Be sure the ladders are stored in the stowage racks before moving the truck to a new location.

11. Inspection of New Equipment

a. General. When a new truck is received by



1 Stake rack assembly (6 rqr)
2 Ring, lashing (8 rqr)
3 Body, stake
4 Assembly, pin and chain (6 rqr)
5 Lever (6 rqr)
6 Hook, lashing (18 rqr)

Figure 10. Stake rack assembly, installed view.

the using organization, inspect the equipment to be sure it is in proper operating condition.

b. Visual Inspection.

(1) Perform the inspections as directed in paragraphs 34 and 36.

(2) Inspect for any damage which may have occurred in shipment. Correct or report all damage to the proper authority.

(3) Inspect all components for loose mountings, dents, or other damage.

(4) Make a visual inspection of the entire unit. Check for loose or missing bolts, nuts, and screws. Inspect all lights and reflectors for broken glass and secure mounting.

12. Servicing New Equipment

a. Service. Perform all maintenance services as directed in paragraphs 34 and 36.

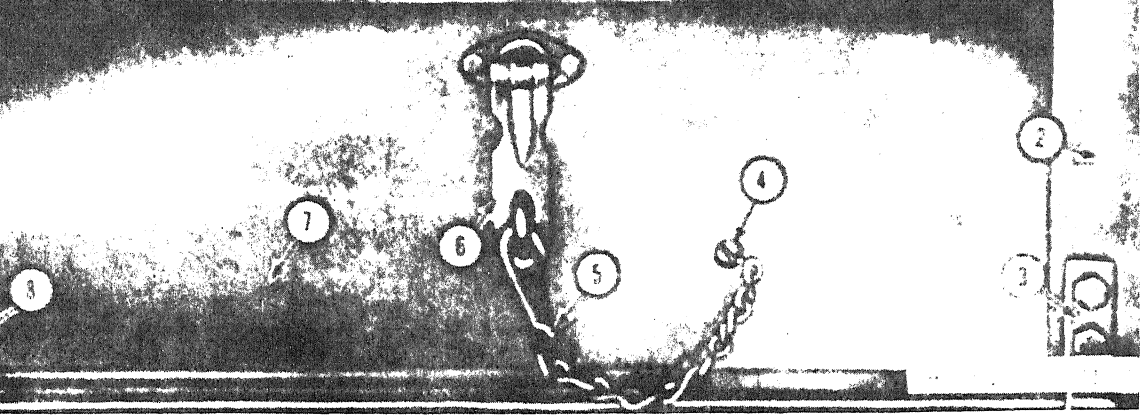
b. Lubrication. Lubricate the stake body as instructed in paragraph 30.

c. Lights. Inspect all lights. See that they are operating properly and securely mounted.

d. Electrical Wiring. See that all electrical connections are securely connected and the wiring harness properly secured in the mounting clips.

e. Spare Wheel Carrier. Inspect the spare wheel carrier. See that the spare wheel is properly secured to the carrier.

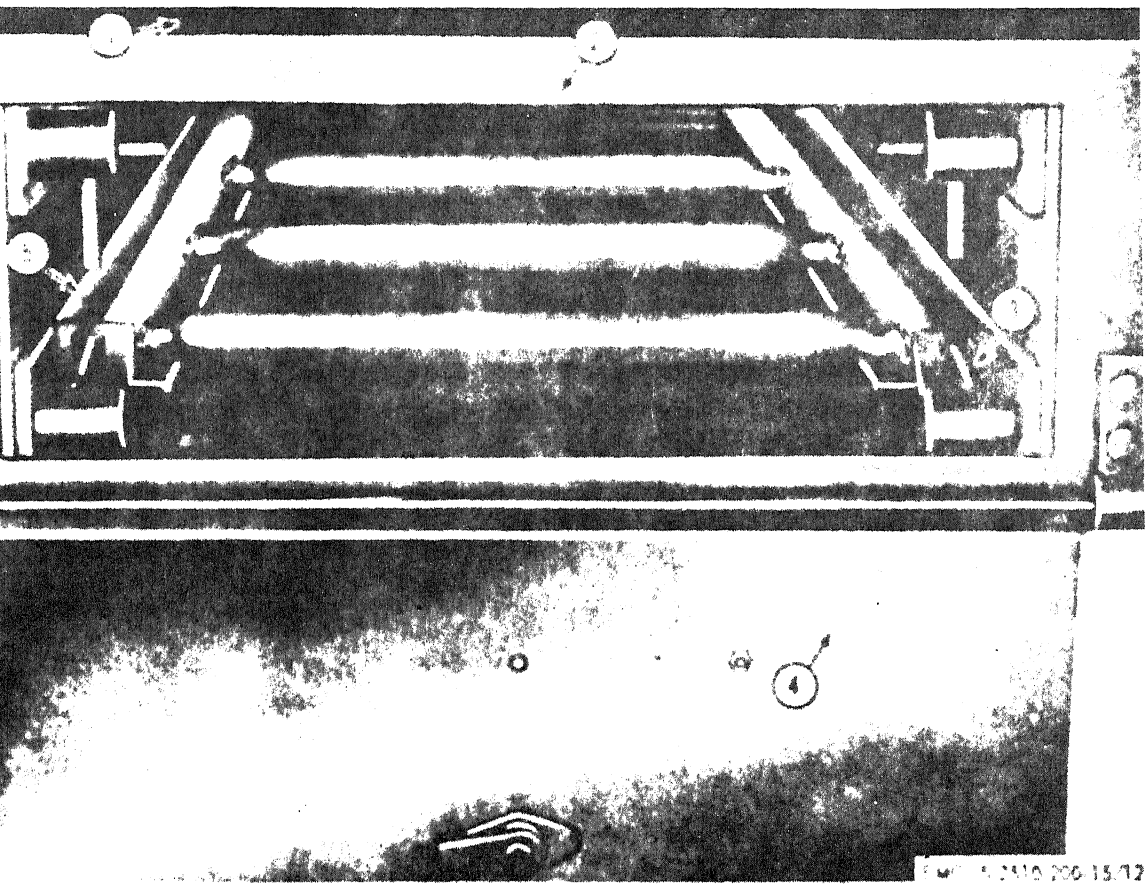
f. Mud Guards. Inspect the mud guard mounting bolts and nuts to see if they are tight.



roller assembly
, stake rear
e (2 rqr)

4 Screw, machine, No. 10–24 x ⅝ in. lg
5 Snap and chain assembly
6 Latch, door
7 Door assembly
8 Cap screw, hex, ⅜–24 x 1¼ in. lg (4 rqr)

Figure 11. Stowage rack door, installed view.



r roller assembly
ke body, rear

3 Ladder assembly (2 rqr)
4 Door assembly
5 Support, ladder storage (4 rqr)

Figure 12. Ladders, installed view.

rage Racks. Inspect the ladders in the compartment to see if they are properly ed. Be sure the compartment door is

olbox. Inspect the toolbox to see if it erly mounted and secured. Be sure the door is secured.

ist or Winch Assemblies. Inspect the assemblies to see that the cables are id the winch is locked.

atch Block Assembly. Inspect the snatch) see if it is properly secured in the win- the bulkhead.

ntrols. Inspect the floodlight controls, ck lock controls, and the winch handles. e they are not bent, broken, or damaged way.

ake Racks and Locks. Inspect the stake and the stake rack locks. Be sure the are properly installed and locked.

ear Roller Assembly. Inspect the roller ly for free rotation.

ed Equipment—General

l equipment which has been stored and shipped in conformance with Army specifications is ready for use on arrival, and serviced in the same manner as new equipment before being put into service.

14. Inspection of Used Equipment

Inspect used truck body units the same as new units (par. 11). Special attention must be given to indications of more than normal wear. Give particular attention to the winch assemblies, rack lock assemblies, and the lights. Deficiencies beyond the tools and ability of 1st and 2d echelon to correct must be referred to the proper authority.

15. Servicing Used Equipment

a. Service the truck body unit (par. 12). Special attention should be given to lubrication services.

b. Make sure the lights are operating properly and are securely mounted.

c. Operate the winches and the rack locks to see if they function properly.

d. Check all bolts and nuts to see if they are tight.

Section II. CONTROLS AND INSTRUMENTS

eneral

s section describes, locates, illustrates, rnishes the operator sufficient informa- ertaining to the various controls, provided e proper use of the stake truck body. For ntrols of the truck refer to TM 9–8028.

17. Winch Controls

Two winches are located on each side and two on the rear of the body. To remove the cable from the drum, push down and forward on the lever (10, fig. 9), the lever will release the pawl and the cable may be pulled off. When operating the winch with the handle, the pawl will hold the desired tension.

Section III. OPERATION UNDER USUAL CONDITIONS

eneral

he instructions in this section are pub- for the use of the personnel responsible e operation of the stake body.

t is essential that the operator know how rform every operation of which the stake unit is capable. This section gives instruc- on loading and securing of the bridging material on the stake body and adjustment of the floodlights.

19. Floodlights

The two floodlights are located on the bulkhead of the body. By turning the handle and bolt assembly (1, fig. 7) counterclockwise on the mounting bracket (9), the support (11) may be moved vertically and horizontally. By turning the handle and bolt assembly (1) on

...n the turnbuckle (6, fig. 8) clockwise ...o remove the hook (7) from the snatch ...

...n the snatch block (2) and pass a cable ...e outside source, such as a 6 x 6 truck, ...ench between the cab and the bulkhead ...through the snatch block.

...e the snatch block. Pull the cable ...the snatch block and hook it to the ...to be loaded. Use the power of the out...ce to pull the material on the body.

...enever possible, load with a crane. ...terial can be loaded and it can be more ...positioned.

...ook the winch cables from the side rail ...Remove the cables from the cable drums ...de winches (par. 17). Pass the cables ... load and secure them to the lashing ... fig. 10) or hooks (6), as desired.

...rt the handle (9, fig. 9) in the ratchet ...). Operate the winch until the desired ...on the cable is obtained. Remove the

...eat the above instructions and secure ... winch cables to the lashing rings on ...head. Tighten the cables by operating ...hes as instructed above. Remove the ...ndles (9) and place them in the tool-

...e sure the protective rubber covering is posi... the cables so the material will not cut the

...ove the snatch block (2, fig 8) and

21. Stake Rack Assemblies

a. The stake rack assemblies (1, fig. 10) may be removed when extra wide material is to be loaded. Remove the racks (par. 10).

b. Tie down the load with the winch cables (par. 20).

22. Unloading Material

a. Release the tension on the winch cables (par. 10).

b. Position the winch cables in their stored position in the side rail gutters and around the rear lashing hooks. Tighten the cables with the winches (par. 10).

c. Unload the material from the stake body with a crane or a suitable lifting device. If no suitable lifting device is available pull the material off with a cable from some outside source.

23. Dismantling for Movement to New Location

a. Preparation for Shipment. This equipment requires no disassembly other than the safe and proper storage of the cables, ladders, winch handles, grease gun, and the lug wrench.

b. Loading and Transporting Equipment. It is not necessary to load the truck on a flatcar for movement to new location, as it may be driven.

24. Installation After Movement to New Location

The only installation required after the equipment is moved to a new location is the ladders and the winch handles (par. 10).

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

...ration in Extreme Cold (Below 0° F.)

...eral. Operation in extreme cold creates ...roblems which require careful inspec... maintenance. Be especially careful ...ubject the stake body to any sudden ...ds or rough handling that might strain ... any metal parts. Start all operations carefully and at slow speed. Check all controls, cables, and winches for good condition.

b. Lubrication. Be sure to use the correct grade of lubricant for all points of application. Refer to paragraph 30.

Caution: **Keep the ladders and the stake body free of ice and snow.**

ɜration Under Dusty or Sandy Condi-ons

ɜeral. Operation of the stake body where an unusual amount of dust or sand cre-ɔblems that only the most careful in- and maintenance can counteract. Dust ɪd are highly abrasive and penetrate rts normally protected under ordinary ns. Use compressed air to clean hard to aces. If possible keep the stake body in sure or covered with a tarpaulin when ɪse.

ɔrication. Keep all external parts clean ɔicated. Be sure to clean all fittings be-ɔlying lubricant. Lubricate sparingly but frequently. Clean an oily or greasy surface as it accumulates dust or sand. Refer to paragraph 30 for the proper lubricant.

27. Operation in Salt Water Areas

a. General. The deterioration and corrosion of exposed metal is greatly accelerated in salt water areas.

b. Lubrication. Clean all lubrication points thoroughly. Lubricate frequently. Refer to paragraph 30 for the proper lubricant.

c. Cleaning. If the equipment has been operated in or through salt water, clean it thoroughly with clean fresh water under pressure.

CHAPTER 3
OPERATOR'S AND ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

28. Operator's Tools and Equipment

Appendix III contains a list of all tools and equipment required by the operator. No special tool are required by the operator.

29. Special Organizational Tools and Equipment

No special tools or equipment are needed to perform the organizational maintenance operations.

Section II. LUBRICATION

30. General Lubrication Information

a. This section contains complete lubrication instructions for the stake body.

b. The lubrication fittings shown in figure 13 are the only zerk-type fittings on the body.

31. Detailed Lubrication Information

a. Care of Lubricants. When storing and handling lubricants, make certain the containers are clean and securely covered to prevent dirt, dust, or other foreign matter from entering. Be sure the lubricant is clean before using it.

b. Cleaning. Clean all surfaces surrounding the point to be lubricated before applying the lubricant. Use a clean cloth dampened in an approved cleaning solvent to clean the surfaces before lubricating. Remove all excess lubricant after lubricating.

32. Points of Application

The following lubrication should be done once every 50 hours for average usage, and more often under severe conditions or hard usage.

a. Rear Roller Assembly. There are two lubrication fittings, one on each end of the assembly. Lubricate every 50 hours with GAA (ref. 2, 2, fig. 13).

b. Rear Winch Assembly Rollers. There are two lubrication fittings on each winch assembly. Lubricate every 50 hours with GAA (ref. 1, 2, fig. 13).

c. Floodlight Handle Bolts, Threads and Support. Lubricate every 50 hours with OE oil. Use OE 30 above (+) 32° F., OE 10 + 40° F. to —10° F., and OES 0° F. to —65° F.

d. Toolbox and Ladder Compartment Door, Hinges, and Latches. Lubricate every 50 hours with OE oil. Use OE 30 above (+) 32° F., OE 10 + 40° F. to —10° F., and OES 0° F. to —65° F.

e. Snatch Block, Sheave Bearing, Hook Swivel, and Turnbuckle Threads. Lubricate every 50 hours with OE oil. Use OE 30 above (+) 32° F., OE 10 + 40° F. to —10° F., and OES 0° F., to —65° F.

f. Stake Rack, Lockshaft, Arm Pins, and Latch Pins. Lubricate every 50 hours with OE oil. Use OE above 30 (+) 32° F., OE 10 + 40° F., to —10° F., and OES 0° F. to —65° F.

g. Winch, Shaft, Ratchet Pawl, and Levers. Lubricate every 50 hours with OE oil. Use OE 30 above (+) 32° F., OE 10 + 40° F. to —10° F., and OES 0° F. to —65° F.

h. Tire Carrier, Shafts, and Gears, Lubricate every 50 hours with OE oil. Use OE 30 above (+) 32° F., OE 10 + 40° F. to —10° F., and OES 0° F. to —65° F.

LUBRICATION CHART

BODY, STAKE: STEEL AND WOOD, FOR MOUNTING ON ORD-M-139 CHASSIS (ALL MAKES AND MODELS) COMPONENT OF 2320-200-1682 TRUCK, BRIDGING.

Reference: SB-38-5-3

Intervals are based on normal operations. Reduce to compensate for abnormal operation and severe conditions. During inactive periods intervals may be extended commensurate with adequate preservation.

Clean fittings before lubricating.

Relubricate after washing or fording.

Clean parts with SOLVENT, dry-cleaning or with OIL, fuel, DIESEL. Dry before lubricating.

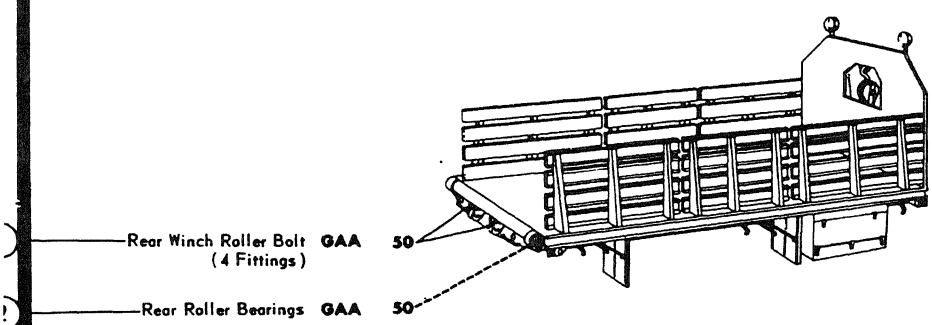
Lubricate points indicated by dotted arrow shafts on both sides of equipment.

- KEY -

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURE			INTERVALS
		Above +32°F	+40°F to -10°F	0°F to -65°F	
OE - OIL, Engine, Heavy Duty		OE 30	OE 10	OES	"Intervals given are in hours of normal operation"
OES - OIL, Engine, Sub-zero					
GAA - GREASE, Automotive and Artillery		All Temperatures			

FOLD FOLD

LUBRICANT • INTERVAL



NOTES:

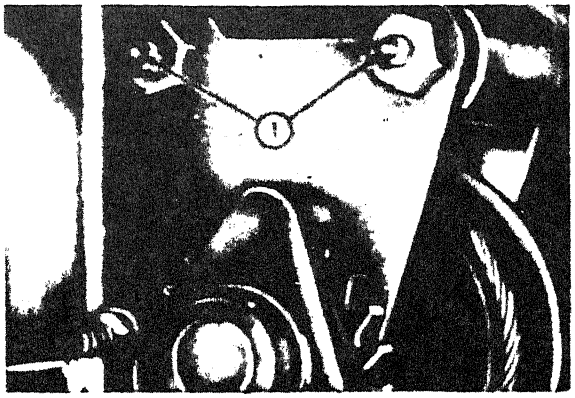
1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -10°F. Remove lubricants prescribed in the key for temperatures above -10°F. Clean parts with SOLVENT, dry-cleaning. Relubricate with lubricants specified in the key for temperatures below -10°F.

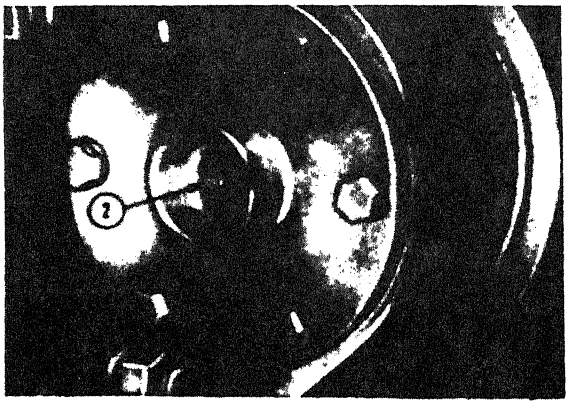
2. CABLES. Every 50 service hours, clean and coat all cables with OE.

3. OIL CAN POINTS. Every 50 service hours, lubricate flood lamp bolt handles, door hinges, door latches, snatch block turnbuckle, stake rack locking linkage, winch shafts, and tire rack gears and bearings with OE.

EMC 5-2510-200-15/13 (1)

Figure 13. Lubrication chart.





Ref. 1. Rear winch assembly.
Ref. 2. Rear roller assembly.

Figure 13—Continued.

Section III. PREVENTIVE MAINTENANCE SERVICES

33. Operator Maintenance

To insure that the equipment is ready for operation at all times, inspect it systematically before operation, during operation, at halt, and after operation, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services will be performed before operation. Defects discovered during operation of the unit will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation was continued. Defects or unsatisfactory operation beyond the scope of the operator or crew must be reported at the earliest opportunity to organizational maintenance.

Note. Complete DD Form 110 (Vehicle and Equipment Operational Record) and report all worn or damaged parts requiring replacement or repair.

Responsibility for performance of preventive maintenance services rests not only with the operator but with the entire chain of command from section chief to commanding officer (AR 750–5).

34. Operator's Daily Services

Intervals				PROCEDURE
Before operation	During operation	At-halt	After operation	
X	X	X	X	*Visual inspection.* Visually inspect the entire unit for cracks, breaks, and loose or missing bolts and nuts. Inspect for any tampering or damage that may have occurred since the unit was last operated. Correct the deficiencies before using the unit.
			X	*Cleaning.* Use a brush to remove loose dirt from the exterior of the unit. Use an approved cleaning solvent to remove accumulations of road tar and grease.

Intervals				
Before operation	During operation	At-halt	After operation	
	X	----------	----------	*Unusual noises or operation.* While operating the unit check for any unusual noises which may indicate trouble. Determine the cause of any excessive vibration which may indicate loose or damaged parts.
			X	*Tools and equipment.* See that all tools and equipment assigned to the unit are in serviceable condition and are properly cleaned and stowed.
X	----------	X	X	*Lubrication.* Inspect the entire unit for missing or damaged lubrication fittings, and for indications of insufficient lubrication. Lubricate as instructed in paragraph 30.
X	----------	X	X	*Appearance.* Inspect the general appearance of the unit, giving particular attention to identification markings and condition of the paint.
X	X	----------	----------	*Lights.* Inspect the lights for proper operation. Check for cracked lens or loose mountings. Check all wiring for worn, frayed, or cut insulation.
X	X	----------	----------	*Rear roller assembly.* Inspect the roller assembly for free rotation. Be sure no stones or other objects are between the roller and the stake bed.
X	X	----------	X	*Spare wheel carrier and tire lock.* Inspect to see that the cable is not broken and the wheel is properly secured to the carrier. Be sure the carrier is properly secured to the body.
X	X	----------	X	*Splash guard and shields.* Inspect the splash guards for dents or warpage. Check the splash shields for cuts or deterioration.
X	X	----------	X	*Mounting or attaching parts.* Inspect the wood sills for cracks, splits, or rotting. Check the mounting bolts for looseness. Inspect the brackets for cracks or broken welds.
X	X	----------	X	*Stowage racks and boxes.* Inspect the racks and boxes for dents or loose mounting bolts. Inspect the door hasps, hinges, and latches for broken welds.
X	----------	----------	X	*Stake body.* Inspect the body for cracks, breaks, warpage, or other damage. Check for broken welds.
X	X	----------	X	*Stake racks.* Inspect the stake racks for cracks, warpage, or broken welds.
X	X	----------	X	*Stake rack lock assemblies.* Inspect the locks for bent shafts or broken pins. Check for proper lubrication and operation.
X	X	----------	X	*Winch assemblies.* Inspect the winch assemblies for proper operation and lubrication. Check for broken or damaged parts or broken welds.
X	X	----------	X	*Snatch block assembly.* Inspect the snatch block for cracks, breaks, loose rivets, or other damage. Check for proper operation and lubrication.
X	X	----------	X	*Winch cables.* Inspect the cables for frayed or cut strands. Check the cable covering for cuts or deterioration. Check the cable clamps for tightness.
X	X	----------	X	*Reflectors.* Inspect the reflectors for broken glass and loose mounting screws.
X	----------	----------	X	*Data plates.* Inspect the data plates for legibility. Be sure they are securely attached to the body.
X	X	----------	X	*Ladders.* Inspect the ladders for broken welds, sprung crossmembers, or other damage. Be sure they are properly secured before moving the truck.

35. Organizational Maintenance

Preventive maintenance is performed by organizational maintenance personnel at bi-weekly and bi-monthly intervals. The bi-weekly interval will be equivalent to 4 weeks or a maximum of 50 hours of use. The bi-monthly interval will be equivalent to 8 weeks or a maximum of 250 hours of use. The preventive maintenance services to be performed at these regular intervals are listed and described in paragraph 36. The numbers appearing in the columns opposite each service refer to a corresponding number appearing on the DA Form 464 and indicate that a report of the services should be made at that particular number of the form. These numbers appear either in the second, the third, or both columns as an indication of the interval at which the service is to be performed. The "Inspection" column is provided for the information of the person performing the inspec-

tion. A number in this column indicates that an inspection should be made of the listed items in accordance with the instructions in the text opposite. The indicated items and instructions constitute the minimum inspection requirements for the equipment.

36. Weekly and Monthly Services

Service			
Inspection	Bi-monthly	Bi-weekly	
			GENERAL
1	1	1	*Before-operation services.* Check and perform services listed in daily before-operation services.
2	2	2	*Lubrication.* Inspect the entire body for missing or damaged lubrication fittings.
	2	2	Replace all damaged or missing fittings.
3	3	3	*Tools and equipment.* Inspect the condition of all tools and equipment assigned to the unit.
	3	3	See that all tools and equipment assigned to the unit are clean, and serviceable, and properly stowed or mounted.
5	5	5	*Publications.* See that a copy of the technical manual is with the unit and in serviceable condition.
6	6	6	*Appearance.* Inspect the general appearance of the stake body, giving special attention to cleanness, legibility of the data plates, and condition of the paint.
	6	6	See that deficiencies noticed are corrected or reported to the proper authority.
7	7	7	*Modifications.* See that all available modification work orders applying to the stake body have been completed on DA Form 464.
			ELECTRICAL SYSTEM
52	52	52	*Lights Wiring and Reflectors.* Inspect the lights and reflectors for loose mounting bolts, defective bulbs, and cracked or broken lens. Check all wiring, for worn, cracked, or frayed insulation; broken wires, and loose or corroded connections.
	52	52	Tighten or replace loose or missing mounting bolts. Replace defective bulbs, lens, and wiring. Tighten or clean loose or corroded connections (pars. 45, 46).
80	80	80	*Frame.* Inspect the complete frame assembly for cracked or broken welds, for bent members, and for loose or missing mounting bolts and nuts. Check all lashing rings and hooks for condition and secure mounting.
	80	80	Tighten or replace loose or missing mounting bolts and nuts. Repair or report all bends, cracks, and breaks (par. 86).
			MISCELLANEOUS
137	137	137	*Cargo Deck.* Inspect the flooring for holes, cuts, or other damage.
	137	137	Repair or report any deficiencies noted (par. 86).
138	138	138	*Winches.* Check the winches for broken or cracked parts, proper operation, and lubrication.
	138	138	Replace broken or cracked parts and lubricate accordingly (pars. 49, 52, 74).

Section IV. TROUBLESHOOTING

37. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the stake body and its components. Each trouble symptom stated is followed by a list of probable causes of trouble. The possible remedy recommended is described opposite the probable cause.

38. Clearance Lights Fail to Operate

Probable cause	*Possible remedy*
Bulb burned out	Replace bulb (par. 45).
Wires disconnected	Secure connections (par. 45).
Wires cut or broken	Replace wiring harness (par. 46).

39. Tire Carrier Fails to Lift Wheel

Probable cause	*Possible remedy*
Cable loose on shaft	Secure cable to shaft (par. 57).
Pin broken	Replace pin (par. 57).

40. Rear Roller Fails to Roll

Probable cause	*Possible remedy*
Material between roller and body	Remove material (par. 48).
Roller bent	Replace roller (par. 48).

41. Winches Fail to Operate

Probable cause	*Possible remedy*
Pin broke	Replace pin (par. 49).
Lever broke	Replace lever (par. 49).

42. Rack Locks Fail to Operate

Probable cause	*Possible remedy*
Pins broke	Replace pins (par. 58).
Key broke or missing	Replace key (par. 58).

Section V. ELECTRICAL SYSTEM

43. Description

The stake body has two clearance lights and two clearance blackout lights on each side. The body has two tail lights mounted in the rear. The tail lights and the clearance lights are 24 volt and have their own wiring harness which is connected to the chassis wiring harness. The stake body has two floodlights mounted on the bulkhead. These are 24-volt and are connected to the chassis electrical system with their own wiring harness. Each light has a ground wire. All lights are powered by the chassis electrical system and are controlled from the truck cab.

44. Floodlight Assemblies

a. General. The two floodlight assemblies are mounted on the top of the bulkhead. They are 24-volt lights and are adjustable, horizontally and vertically.

b. Removal and Disassembly.

(1) Remove the screw (4, fig. 7), the lockwasher, and the wiring harness (3) from the floodlight (5). Remove the nut (6), flat washer (7), and the floodlight from the lever (8).

(2) Disconnect the ground wire (2) from the chassis. Remove the ground wire (2) from the support (11) at the top. Remove the wiring harness (3) from the support at the bottom.

(3) Loosen the handle and bolt assembly (1) and remove the support (11) from the mounting bracket (9).

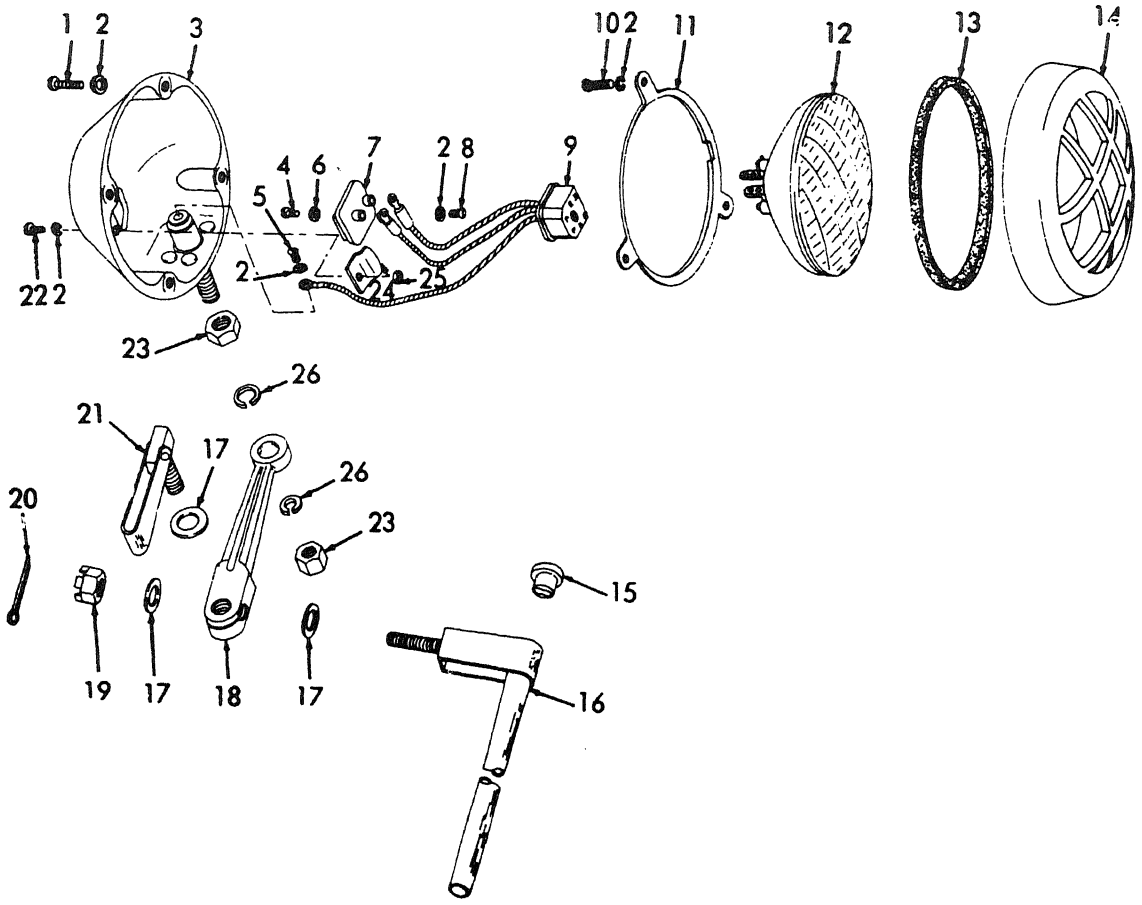
(4) Remove the handle and bolt assemblies (1) from the mounting bracket (9).

(5) Remove the rubber grommet (15, fig. 14) from the support (16).

(6) Remove the handle and bolt assembly (21) and the flatwasher (17) from the lever (18).

(7) Remove the cotter pin (20), the nut (19), the lever (18), and the two flat washers (17) from the support (16).

(8) Remove the four screws (1), lockwashers (2) and the door (14) from



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1	Screw, machine, No. 10–24 x ⅞ in. (4 rqr)	14	Door
2	Lockwasher, No. 10 (12 rqr)	15	Grommet, rubber
3	Body assembly	16	Support, floodlight
4	Screw, machine, No. 10–32 x ¼ in. (2 rqr)	17	Washer, flat, ½ in. (3 rqr)
5	Screw, machine, No. 10–32 x ⅜ in.	18	Lever
6	Lockwasher No. 10 (2 rqr)	19	Nut, castellated, ½–20
7	Plate assembly, terminal	20	Pin, cotter, ⅛ x 1½ in.
8	Screw, machine, No. 10–32 x ¼ in. (2 rqr)	21	Handle and bolt assembly
9	Connector and wiring assembly	22	Screw, machine, No. 10–32 x ⅜ in. (2 rqr)
10	Screw, machine, No. 10–24 x ⅝ in. (3 rqr)	23	Nut, plain, ⅝–18 (2 rqr)
11	Plate	24	Clip (2 rqr)
12	Lamp unit, sealed	25	Nut, plain, hex, No. 10 (2 rqr)
13	Gasket	26	Lockwasher, ⅝ in. (2 rqr)

Figure 14. Floodlight and support, exploded view.

the body (3). Disconnect the connector and wiring assembly (9).

(9) Remove the three screws (10), lockwashers (2), the plate (11), the lamp unit (12), and the gasket (13) from the door (14).

(10) Remove the screw (5), the lockwasher (2) and the lead from the body (3).

(11) Remove the two screws (4, 8), two lockwashers (2, 6), and the two leads from the plate assembly (7). Remove the connector and wiring assembly (9) from the body (3).

Note. Tag the three leads to insure proper installation.

(12) Remove the two screws (22), lockwashers (2), nuts (25), clips (24) and the plate assembly (7), from the body (3).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts with a cloth dampened in an approved cleaning solvent.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the lamp unit for cracks, breaks, or other damage. Replace a defective lamp unit.

(4) Inspect the gasket for cracks, separation, or deterioration. Replace a damaged gasket.

(5) Inspect the plate and the door for cracks, bends, warpage, or other damage. Repair or replace as necessary.

(6) Inspect the connector and wiring assembly for breaks, cracks, cut leads, loose connections, or other damage. If defective, replace the body assembly.

(7) Inspect the clip and plate for cracks, breaks, or other damage. If defective, replace the body assembly.

(8) Inspect the body for cracks, breaks, warpage, or other damage. Replace a damaged body assembly.

(9) Inspect the support for cracks, bends, and stripped or damaged threads. Repair or replace, as necessary.

(10) Inspect the handle bolts and the lever for breaks, bends, cracks, or other damage. Repair or replace, as necessary.

(11) Inspect the screws, nuts, and lockwashers for stripped threads or other damage. Replace all damaged hardware.

(12) Use new cotter pins and gaskets.

d. Reassembly and Installation.

(1) Position the plate assembly (7) in the body (3), and secure with the two clips (24), screws (22), lockwashers (2), and nuts (25).

(2) Position the two leads of the connector and wiring assembly (9) on the plate and secure with the two screws (4, 8) and lockwashers (2, 6).

(3) Position the connector and wiring assembly lead in the body (3) and secure with the screw (5) and the lockwasher (2).

(4) Position a new gasket (13), the lamp unit (12), and the plate (11) in the door (14). Secure with the three screws (10) and lockwashers (2).

(5) Connect the lamp unit (12) to the connector and wiring assembly (9). Secure the door (14) to the body (3) with the four screws (1) and lockwashers (2).

(6) Position the two flat washers (17) and the lever (18) on the support (16). Secure with the nut (19) and a new cotter pin (20).

(7) Position the rubber grommet (15) in the support (16). Install the flat washer (17), and the handle and bolt assembly (12) in the lever (18).

(8) Position the support (11, fig. 7) in the bracket (9). Secure with the handle and bolt assembly (1).

(9) Install the nut (6), the ground wire (2), and the flat washer (7) on the floodlight assembly (5). Position the floodlight assembly through the lever (8). Secure with the nut (6) and the flat washer (7).

(10) Insert the ground wire (2) through the grommet and the support (11). Secure to the chassis.

(11) Insert the electrical lead through the support (11) and the grommet from the bottom. Secure to the floodlight assembly (5) with the screw (4) and the lockwashers.

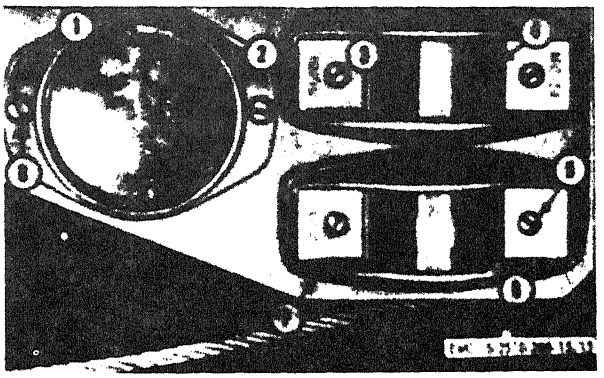
(12) Adjust the floodlight when necessary (par. 19).

45. Clearance Lights, Marker Lights, and Reflector Assemblies

a. General. There is an amber service and an amber blackout clearance light located on each front corner of the body. There is a red service and a red blackout clearance light located on each rear corner of the body. These are all 24-volt. There are four amber and four red reflectors located on the body.

b. Removal and Disassembly.

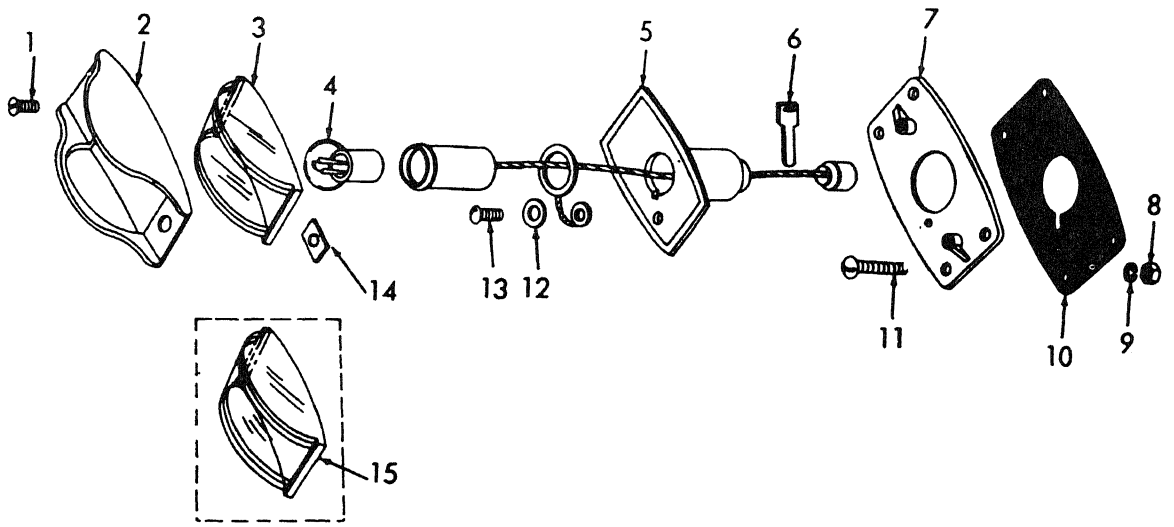
(1) Remove the two machine screws (5, fig. 15).



1 Reflector, indicating, clearance, red
2 Body, stake, military bridging
3 Door (2 rqr)
4 Lens assembly, clearance light, red
5 Screw, machine, No. 10–24 x ¼ in. (4 rqr)
6 Filter assembly, clearance light blackout, red
7 Felt, mechanical, preformed (2 rqr)
8 Screw, machine, ¼–20 x ¾ in. (2 rqr)

Figure 15. Clearance light, blackout light, and reflector, installed view.

(2) Remove the door (3) and the lens (4).
(3) Remove the lamp (4, fig. 16).
(4) Remove the screw (13) and the flat washer (12).
(5) Disconnect the light wire from the wiring harness.
(6) Remove the four screws (11), nuts (8), and lockwashers (9). Remove the grommet and wiring harness assembly (5), the plate (7), and the gasket (10), from the stake body (2, fig. 15).
(7) Remove the two speed nuts (14, fig. 16) and the lens assembly (3) from the door (2).
(8) Follow the above procedure to remove and disassemble the blackout lights.
(9) Remove the two screws (8, fig. 15),



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1 Screw, machine, countersunk head, No. 10–24 x ¼ in. (2 rqr)
2 Door
3 Lens assembly, clearance light, red
4 Lamp, incandescent, 24 to 28 v, No. G–6
5 Grommet and wiring harness assembly
6 Tag, service, No. 489
7 Plate
8 Nut, plain, No. 10–24 (4 rqr)
9 Lockwasher, No. 10 (4 rqr)
10 Felt gasket, mechanical, preformed
11 Screw, machine, No. 10–24 x ¾ in. (4 rqr)
12 Washer, flat, No. 8
13 Screw, machine, No. 8–32 x ⅞ in.
14 Nut, speed (2 rqr)
15 Filter assembly, clearance light blackout, red

Figure 16. Clearance and blackout light, exploded view.

nuts, lockwashers, and the reflectors (1), from the stake body (2).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts with a cloth dipped in an approved cleaning solvent.

(2) Clean the threads of the screws with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the wiring for cuts or deteriorated covering. Repair or replace, as necessary.

(4) Inspect the wiring connections for breaks, dents, or other damage. Replace the damaged assembly.

(5) Inspect the lens for cracks or chips. Replace a damaged lens.

(6) Inspect the lamp for brightness, rust, or damage. Replace a damaged lamp.

(7) Inspect the plate and the door for cracks, breaks, warpage, or other damage. Replace as necessary.

(8) Inspect the mounting screws for stripped or damaged threads. Replace all damaged hardware.

(9) Inspect the reflectors for cracks, bends, or other damage. Repair or replace, as necessary.

d. Reassembly and Installation.

(1) Position the gasket (10, fig. 16) and the plate (7) on the stake body frame. Secure with the four screws (11), nuts (8), and lockwashers (9).

(2) Position the grommet and wiring harness assembly (5) through the plate (7).

(3) Install the screw (13), through the ground wire and the flat washer (12). Secure the screw to the grommet and wiring harness assembly (5).

(4) Position the lens (3) in the door (2) and secure with the two speed nuts (14).

(5) Position the lamp (4) in the grommet and wiring harness assembly (5).

(6) Secure the door (2) to the plate (7) with the two screws (1).

(7) Position the reflector (1, fig. 15) on the body (2). Secure with the two screws (8), nuts, and lockwashers.

(8) All blackout and clearance lights may be reassembled and installed as instructed above.

Note. The electrical lead of the clearance light is identified with a No. 489 metal tag. The blackout light has a No. 490 tag.

(9) Connect the lead to the wiring harness.

46. Floodlight and Clearance Light Wiring Harness

a. General. The wiring harness for the floodlights is separate from the clearance lights. The wiring is 24-volt and all lights are controlled from the truck cab.

b. Removal.

(1) Disconnect the floodlight wiring harness from the chassis.

(2) Disconnect the two floodlight ground wires from the chassis.

(3) Remove the wiring harness and the two ground wires from the floodlights (par. 44).

(4) Pull the wiring harness from the two front members of the stake body.

(5) Disconnect the body wiring harness from the chassis wiring harness.

(6) Disconnect the clearance, blackout, tail, and stop lights from the body wiring harness (par. 46).

(7) Remove the body wiring harness from the mounting clips and the body.

c. Cleaning, Inspection, and Repair.

(1) Clean the wires and the wiring harness with a cloth dampened in an approved cleaning solvent.

(2) Inspect the floodlight ground wires for cuts, deteriorated or torn covering, loose, or damaged connections. Repair or replace a damaged ground wire.

(3) Inspect the floodlight wiring harness for broken, bent, or loose connections. Inspect for cut, torn, or deteriorated covering. Replace a damaged wiring harness.

(4) Inspect the clearance and blackout light wiring harness for bent, broken, or damaged connections. Check for cut, torn, or deteriorated covering. Replace a damaged wiring harness.

(5) Inspect for bent or broken mounting clips. Repair or replace as necessary.

d. Installation.

(1) Position the clearance and blackout light wiring harness in the mounting clips.

(2) Connect the clearance, blackout, tail, and stop lights to the wiring harness (par. 45).

(3) Connect the body wiring harness to the chassis wiring harness.

(4) Position the two leads of the floodlight wiring harness through the two front members of the stake body.

(5) Install the wiring harness and the two ground wires on the floodlights (par. 44).

(6) Connect the two ground wires to the truck chassis.

(7) Connect the floodlight wiring harness to the truck chassis.

Section VI. FRAME AND STAKE BODY ASSEMBLY

47. Description

The stake body frame is secured to the truck chassis with eight brackets. The eight brackets on the frame are welded and the eight brackets on the chassis are bolted. The stake body is equipped with stake racks, rack locks, rear roller assembly, two rear winches, four side winches, toolbox, stowage compartment, spare tire carrier, splash shields and guards, a snatch block, data plates, and a front bulkhead. A more complete description of each item will be given under each component paragraph.

48. Rear Roller Assembly

a. General. The rear roller is mounted on the rear of the stake body by a bearing housing, on each end. The bearing housings are bolted to the stake body. The roller is used as an aid in pulling bridge material onto the stake body.

b. Removal.

(1) Remove the cap screw (1, fig. 17) and the lockwasher.

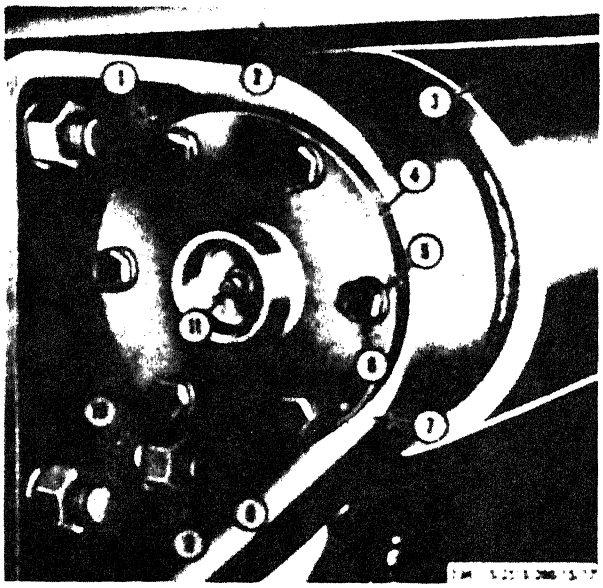
(2) Remove the three cap screws (8), nuts (9), and lockwashers (10). Remove the bearing support (7) from the roller (3). Lower this end of the roller down on the rear winch rollers.

(3) Follow the above instructions and remove the right-hand bearing support from the rear roller assembly (3).

(4) Use a suitable lifting device and remove the rear roller assembly.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.



1 Cap screw, hex, ⅝–18 x 1¼ in.
2 Body, stake
3 Roller assembly, rear
4 Cap, bearing
5 Lockwasher, ⅝ in. (6 rqr)
6 Cap screw, hex, ⅝–16 x 1¼ in. (6 rqr)
7 Support, bearing, lh
8 Cap screw, hex, ⅝–18 x 2 in. (3 rqr)
9 Nut, plain, hex, ⅝–18 (3 rqr)
10 Lockwasher, ⅝ in. (3 rqr)
11 Fitting, lubrication, ⅛–27

Figure 17. Rear roller assembly, installed view.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the lubrication fittings to see if they take lubrication properly.

(4) Inspect the bearing cap and the bearing housing for cracks, breaks, warp-

age, and other damage. Replace a damaged bearing housing and cap.

(5) Inspect the roller assembly for breaks, cracks, dents, warpage, or other damage. Replace a damaged roller assembly.

(6) Inspect the bearings for excessive wear and free rotation. Report a damaged bearing to the proper authority for replacement.

d. Installation.

(1) Use a suitable lifting device and position the rear roller assembly (3) on the rear winch rollers.

(2) Position the left-hand bearing support (7) on the rear of the stake body (2). Secure with the three cap screws (8), nuts (9), and lockwashers (10). Install the cap screws (1) and the lockwasher.

(3) Position the roller assembly (3) and the bearing in the left-hand bearing support (7). Position the right-hand bearing support on the roller assembly bearing.

(4) Secure the right-hand bearing support to the stake body (2) with the three cap screws (8), nuts (9), and lockwashers (10). Install the cap screw (1) and the lockwasher.

(5) Lubricate as instructed in paragraph 30.

49. Rear Winch Assemblies

a. General. The two rear winches are the ratchet-type and are self-locking. The cable from the winch is passed over the top of the load and secured to the lashing rings on the front bulkhead. The cables are provided with rubber coverings to protect the load and the cables. Insert the handle in the winch lever and operate the winch until the desired tension is obtained. The winch mounting brackets are welded to the stake body. The two rollers located on the winch mounting brackets aid in supporting the rear roller when a heavy load is applied.

b. Removal and Disassembly.

(1) Unhook the cable (8, fig. 9) from the side of the stake body (16).

(2) Push down and forward on the ratchet lever (10). This will release the pawl (11) and the cable (8) may be removed from the drum (7) while holding this tension.

(3) Remove the two lubrication fittings (2) from the two bolts (3).

(4) Remove the pin (20, fig. 18), the collar (21), and the lever ratchet (19) from the shaft (17).

(5) Remove the wheel (4), the flat washer (5), and the woodruff key (18), from the shaft (17).

(6) Remove the pin (14) from the drum (16) and the shaft (17).

(7) Remove the shaft and the drum from the mounting brackets (7, 9).

(8) Remove the cotter pin (22), nut (1), pawl (2), and the pawl spring (3), from the mounting bracket (7).

(9) Remove the two nuts (6), bolts (10), and rollers (12) from the two brackets (7, 9).

(10) Remove the two bushings (13) from the two brackets (7, 9).

(11) The cable is secured to the drum with solder. Melt the solder and remove the cable (15) from the drum (16).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

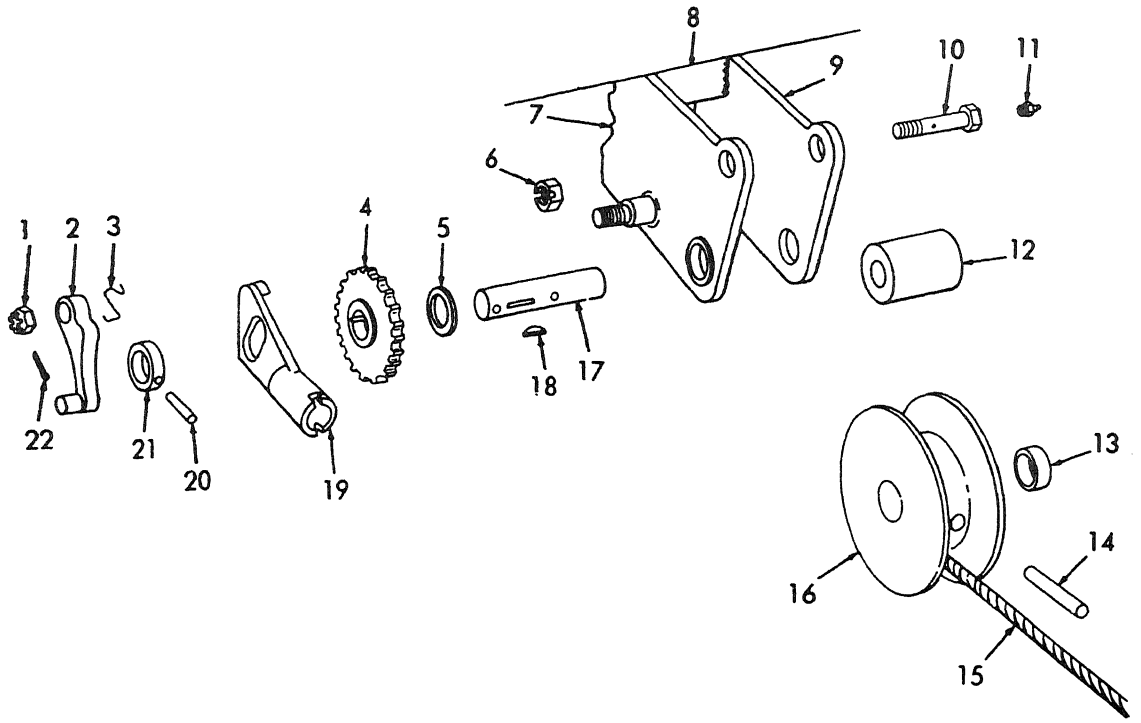
(3) Inspect the cable drum for cracks, breaks, warpage, and other damage. Repair or replace, as necessary.

(4) Inspect the wheel for cracks, breaks, chipped or broken teeth. Replace a damaged wheel.

(5) Inspect the bushings for scoring, or excessive wear. Replace a damaged bushing.

(6) Inspect the shaft for alinement, burrs, and excessive wear. Remove all burrs with a fine cut file. Replace a damaged shaft.

(7) Inspect the lever for cracks, breaks,



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1 Nut, castellated, hex, ½–20
2 Pawl, ratchet wheel
3 Spring, helical, torsion
4 Wheel, ratchet cable drum
5 Flat washer, 1 5/8 in. id x 1⅞ in. od x ⅛ in. thk
6 Nut, castellated, hex, ¾–16 (2 rqr)
7 Bracket, pawl stud side, W/A
8 Spacer, W/A
9 Bracket, W/A
10 Bolt, internally relieved body, ¾–16 x 4¾ in. (2 rqr)
11 Fitting, lubrication, ⅛–27 (2 rqr)
12 Roller, fair-lead guide
13 Bushing, sleeve (2 rqr)
14 Pin, groove, headless, ⅜ x 3 in.
15 Cable assembly, 5/8 x 25 ft
16 Drum, cable, winch
17 Shaft, main, winch
18 Key, Woodruff, No. 607
19 Lever ratchet, rear winch
20 Pin, grooved, headless, ¼ x 2 in.
21 Collar, shaft
22 Pin, cotter, ⅛ x 1 in.

Figure 18. Rear winch assembly, exploded view.

warpage, and other damage. Replace a damaged lever.

(8) Always use new pins and cotter pins when installing the winch assembly.

(9) Inspect the pawl and the pawl spring for cracks, breaks, twisting, or warpage. Replace a damaged spring or pawl.

(10) Inspect the mounting bolts and nuts for stripped or damaged threads. Clean the lubrication passages of the bolts, to remove all dirt or foreign matter. Replace all damaged nuts and bolts.

(11) Inspect the mounting brackets for breaks, bends, broken welds, or other damage. Report a damaged bracket to the proper authority for repair or replacement.

d. Reassembly and Installation.

(1) Insert the cable (15) through the drum (16). Secure the cable to the drum with solder.

(2) Install the two bushings (13) in the two brackets (7, 9).

(3) Position the two rollers (12) in the two brackets (7, 9). Secure with the two bolts (10) and nuts (6).

(4) Position the spring (3) and the pawl (2) on the mounting bracket (7). Secure with the nut (1) and the cotter pin (22).

(5) Position the drum (16) in the mounting brackets (7, 9). Insert the shaft (17) through the brackets (7, 9) and the drum.

(6) Install the pin (14) through the drum (16) and the shaft (17).

(7) Position the flat washer (5) on the shaft (17). Position the woodruff key (18) in the shaft. Install the wheel (4) on the shaft over the key.

(8) Position the lever ratchet (19) and the collar (21), on the shaft (17). Secure the collar to the shaft with the pin (20).

(9) Install the two lubrication fittings (2, fig. 9) in the two bolts (3).

(10) Secure the hook on the cable (8) to the side of the stake body (16). Operate the winch until the cable is tight.

(11) Lubricate as instructed in paragraph 30.

50. Toolbox Assembly

a. General. The toolbox is mounted under the stake body on the right side at the front. The toolbox door opens vertically and is secured to the toolbox with three hinges. Two latches are secured to the door to lock it. Two snaps and chains are secured to the door with machine screws to secure the latches. The hinge pin with the center hinge installed on it is welded to the door.

b. Removal and Disassembly.

(1) Remove the two snaps (11, fig. 19) from the two latches (12).

(2) Turn the two latches (12) 45° counterclockwise, and open the door (9).

(3) Remove the six cap screws (2), lockwashers (3), nuts (4), and the toolbox assembly (6), from the stake body (1).

(4) Remove the two screws (10), nuts, and lockwashers. Remove the two snap and chain assemblies (11) from the door (9).

(5) Remove the six cap screws (8), nuts, and lockwashers.

(6) Remove the door assembly (9) from the toolbox (6). Remove the two outside hinges (7) from the door.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean the threads of the cap screws and nuts with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the snap and chain assemblies for cracks, breaks, or excessive wear. Replace a damaged snap and chain assembly.

(4) Inspect the door for warpage, cracks, breaks, or other damage. Repair or replace, as necessary.

(5) Inspect the hinges for cracks, breaks, warpage, elongated pin holes, or other damage. Repair or replace, as necessary.

(6) If it is necessary to replace the center hinge or the hinge pin, replace the door assembly. The hinge pin is welded to the door.

(7) Inspect the latches for breaks, cracks, warpage, excessive wear or other damage. Repair or replace, as necessary.

Note. The nut that secures the latch to the door is spot welded to the latch. It will be necessary to cut the nut off the latch.

(8) Inspect the toolbox for cracks, breaks, dents, warpage, or other damage. Repair or replace, as necessary.

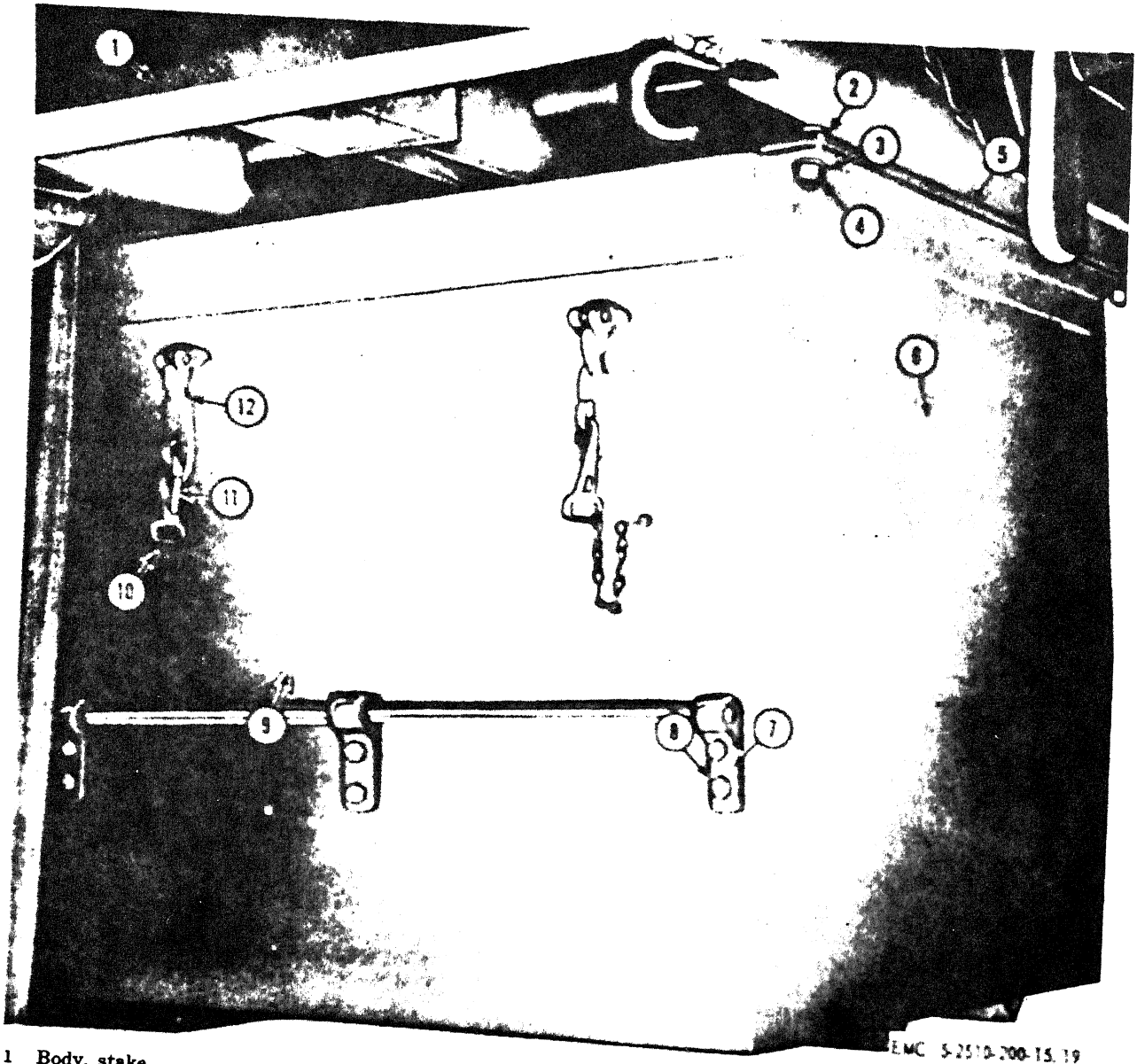
d. Reassembly and Installation.

(1) Position the two hinges (7) on the door (9). Position the door on the toolbox (6). Secure with the six cap screws (8), nuts, and lockwashers.

(2) Position the two snap and chain assemblies (11) on the door (9) and secure with the two screws (10), nuts and lockwashers.

(3) Secure the toolbox assembly (6) to the stake body (1) with the six cap screws (2), nuts (4), and lockwashers (3).

(4) Close the door (9) and lock the latches



1 Body, stake
2 Cap screw, hex, ½–20 x 1¼ (6 rqr)
3 Lockwasher, ½ in. (6 rqr)
4 Nut, plain, hex, ½–20 thd (6 rqr)
5 Bracket, toolbox (2 rqr) W/A
6 Toolbox assembly
7 Hinge (3 rqr)
8 Cap screw, hex, ⅜–24 x 1¼ in. (6 rqr)
9 Door assembly
10 Screw, machine, No. 10–24 x ⅝ in.
11 Snap and chain assembly (2 rqr)
12 Latch, door (2 rqr)

Figure 19. Toolbox, installed view.

(12). Fasten the latches with the snaps (11).

(5) Lubricate the door hinges (7) and the latches (12), (par. 30).

51. Snatch Block Assembly

a. General. The snatch block is mounted in the front member of the body, and is held in place by a welded support and a welded turnbuckle assembly. To use the snatch block, release the turnbuckle. Remove the turnbuckle hook from the hook on the snatch block body. Pass the cable, from an outside source, between the cab and the front of the body through the snatch block, which can be opened by releasing

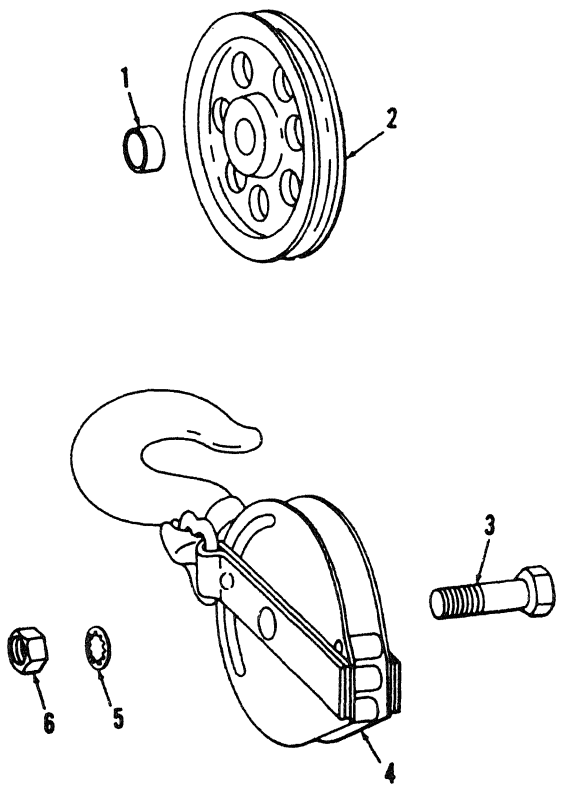
the catch on the side near the hook. Material may be pulled on the body this way.

b. Removal and Disassembly.

(1) Turn the turnbuckle (6, fig. 8) clockwise enough to remove the hook (7) from the snatch block (2).

(2) Remove the snatch block (2) from the mounting support (1).

(3) Remove the nut (6, fig. 20), the shakeproof washer (5), the pin (3) and the sheave (2), from the snatch block body (4).



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1 Bushing, 1 in. id x 1½ od x 1⅜ in. thk
2 Sheave
3 Pin, 1 in.–8 x 3½ in.
4 Body, snatch block
5 Washer, shakeproof, 1 in. id x 1⅝ in. od x ⅛ in. thk
6 Nut, hex, plain, 1–8

Figure 20. Snatch block, exploded view.

(4) Remove the hook (7, fig. 8), from the turnbuckle (6). Remove the turnbuckle, from the eyebolt (5).

c. Cleaning and Inspection.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the pin for excessive wear, and stripped or damaged threads. Replace a damaged pin.

(4) Inspect the nut for stripped or damaged threads. Inspect the shakeproof washer for cracks, warpage, or broken teeth. Replace a damaged nut or washer.

(5) Inspect the sheave for cracks, breaks, burrs, or excessive wear. Replace a damaged sheave.

(6) Inspect the sheave bushing for burrs, or excessive wear. Report a damaged bushing to the proper authority for replacement.

(7) Inspect the hook and the body for cracks, breaks, or other damage. Replace a damaged snatch block.

(8) Inspect the turnbuckle and the hook for breaks, bends, and stripped or damaged threads. Replace a damaged hook and turnbuckle.

(9) Inspect the turnbuckle eyebolt for cracks, bends, and stripped or damaged threads. Report a damaged eyebolt to the proper authority for repair or replacement.

d. Reassembly and Installation.

(1) Position the sheave (2, fig. 20) in the body (4). Secure with the pin (3), nut (6), and shakeproof washer (5).

(2) Hook the snatch block (2, fig. 8) on the mounting support (1).

(3) Install the turnbuckle (6) on the eyebolt (5). Install the hook (7) in the turnbuckle.

(4) Fasten the hook to the hook on the body of the snatch block. Secure the snatch block (2) by turning the turnbuckle (6) counterclockwise.

(5) Lubricate the sheave bearing, hook

swivel, and the turnbuckle threads (par. 30).

52. Side Winch Assemblies

a. General. The stake body is equipped with four tie-down winches, two on each side. The winches are operated with a removable handle which, when not in use, is stored in the toolbox. When the winches are not in use, the cable hooks are placed over the hook pins at each end of the side rail gutter. Push down and inward on the lever with the left hand and unwind the cable of the drum with the right hand. Position the cable over the load and secure the cable hook to the desired lashing hook on the opposite side of the body. Operate the winch as instructed in paragraph 10 until the desired tension is obtained.

b. Removal and Disassembly.

(1) Remove the pin (6, fig. 21), the collar (4) and the lever (7) from the shaft (5).

Lockshaft, rack lock
Body, stake
Bracket, w/pawl stud
Collar, shaft
Shaft, winch
Pin, headless, grooved, ¼ x 2 in.
Lever, ratchet
Bracket

Figure 21. Side winch, installed view.

(2) Use a suitable puller and remove the wheel (9, fig. 22). Remove the key (11) and the washer (10) from the shaft (12). Pull the cable (4) off the drum (3).

(3) Remove the pin (17) from the drum (3) and the shaft (12). Remove the shaft and the drum from the brackets (1, 5).

(4) Remove the bushings (2) from the two brackets (1, 5).

(5) Remove the cotter pin (14), the nut (13), the pawl (15), and the pawl spring (16), from the bracket (5).

(6) The cable (4) is soldered to the drum (3). Melt the solder and pull the cable from the drum.

Note. To remove and disassemble the two rear side winches, it will be necessary to cut the brackets off the frame due to the limited space between the body crossmember and the stake rack support.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean all threads with a stiff wire-brush dipped in an approved cleaning solvent.

(3) Inspect the cable drum for cracks, breaks, warpage, or other damage. Repair or replace drum, as necessary.

(4) Inspect the wheel for cracks, breaks, chipped or broken teeth. Replace a damaged wheel.

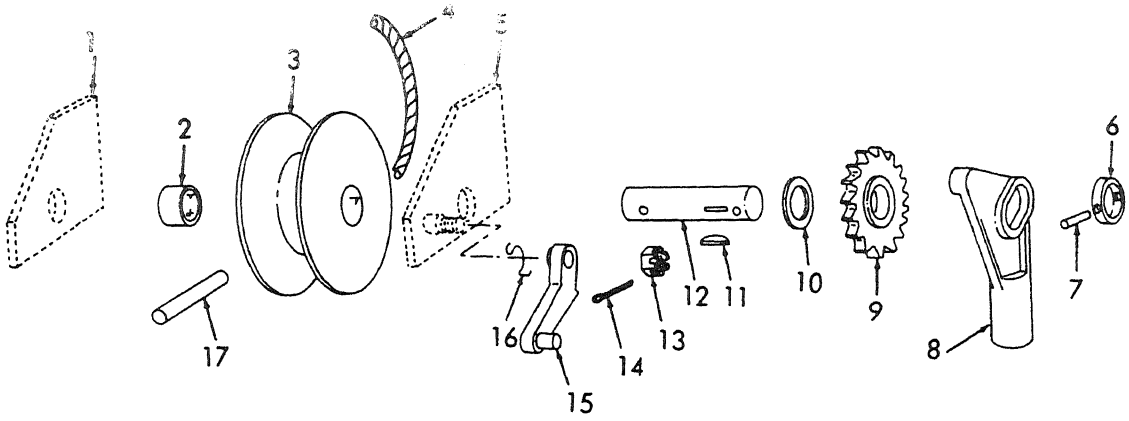
(5) Inspect the bushings for scoring, or excessive wear. Replace a damaged bushing.

(6) Inspect the shaft for alinement, burrs, and excessive wear. Remove all burrs with a fine cut file. Replace a damaged shaft.

(7) Inspect the lever for cracks, breaks, warpage or other damage. Replace a damaged lever.

(8) Always use new pins and cotter pins when installing the winch assembly.

(9) Inspect the pawl and the pawl spring for cracks, breaks, twisting, or warpage. Replace a damaged spring or pawl.



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1 Bracket
2 Bushing, sleeve (2 rqr)
3 Drum, cable, winch
4 Cable, 5/16 in. x 19 ft lg
5 Bracket, w/pawl stud
6 Collar, shaft
7 Pin, headless, grooved, ¼ x 2 in. lg
8 Lever, ratchet
9 Wheel, ratchet
10 Flat washer, 1 5/16 in. id x 1⅞ in. od x ⅛ in. thk
11 Key, Woodruff, No. 11, 3/16 x ⅞ in.
12 Shaft, winch
13 Nut, castellated, hex, ¾–16
14 Pin, cotter, ⅛ x 1 in. lg
15 Pawl
16 Spring, pawl
17 Pin, headless, grooved, ⅜ x 3 in.

Figure 22. Side winch assembly, exploded view.

(10) Inspect the mounting bolts and nuts for stripped or damaged threads. Clean the lubrication passages of the bolts to remove all dirt or foreign matter. Replace all damaged nuts and bolts.

(11) Inspect the mounting brackets for breaks, bends, broken welds, or other damage. Report a damaged bracket to the proper authority for repair or replacement.

d. Reassembly and Installation.

(1) Position the cable (4) through stake body and the drum (3). Secure the cable to the drum with solder.

(2) Install the two bushings (2) in the two brackets (1, 5).

(3) Position the drum (3) in the brackets (1, 5). Insert the shaft (12) through the brackets and the drum.

(4) Secure the drum to the shaft (12) with the pin (17).

(5) Position the spring (16) and the pawl (15) on the bracket (5). Secure with the nut (13) and the cotter pin (14).

(6) Position the washer (10) on the shaft (12). Position the key (11) in the shaft.

(7) Install the wheel (9) on the shaft (12) over the key (11).

(8) Position the lever (7, fig. 21) and the collar (4) on the shaft (5). Secure the collar to the shaft with the pin (6).

(9) Operate the winch as instructed in paragraph 10 until the cable is tight.

(10) Lubricate the winch shaft, pawl, and bushings (par. 30).

53. Winch Cable Assemblies

a. General. Each winch has a cable. The cables of the side winches are 5/16 inch by 19 feet and each has a rubber covering of 10 feet long. The cables of the two rear winches are 5/16 inch by 25 feet and each has 2 pieces of rubber covering 4 feet long. A 7/16-inch by 30-inch chain, with grab hook, is fastened to the end of each cable with a thimble and a clamp. When the cables are not in use, the rear side winch cable is positioned in the side gutter along the frame and hooked on the pin in the front of the

around the rear lashing hooks when not in use.

b. Removal and Disassembly.

(1) Remove the cable (1, fig. 23) from its stored position.

(2) Remove the clamp (5) from the cable (1).

(3) Remove the cable and the thimble (4) from the chain and hook assembly (3).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Inspect the cable for cut, frayed, or broken strands. Replace a defective cable.

Note. When replacing the cable, cut it

frayed or deteriorated rubber, separation, or other damage. Replace a damaged covering.

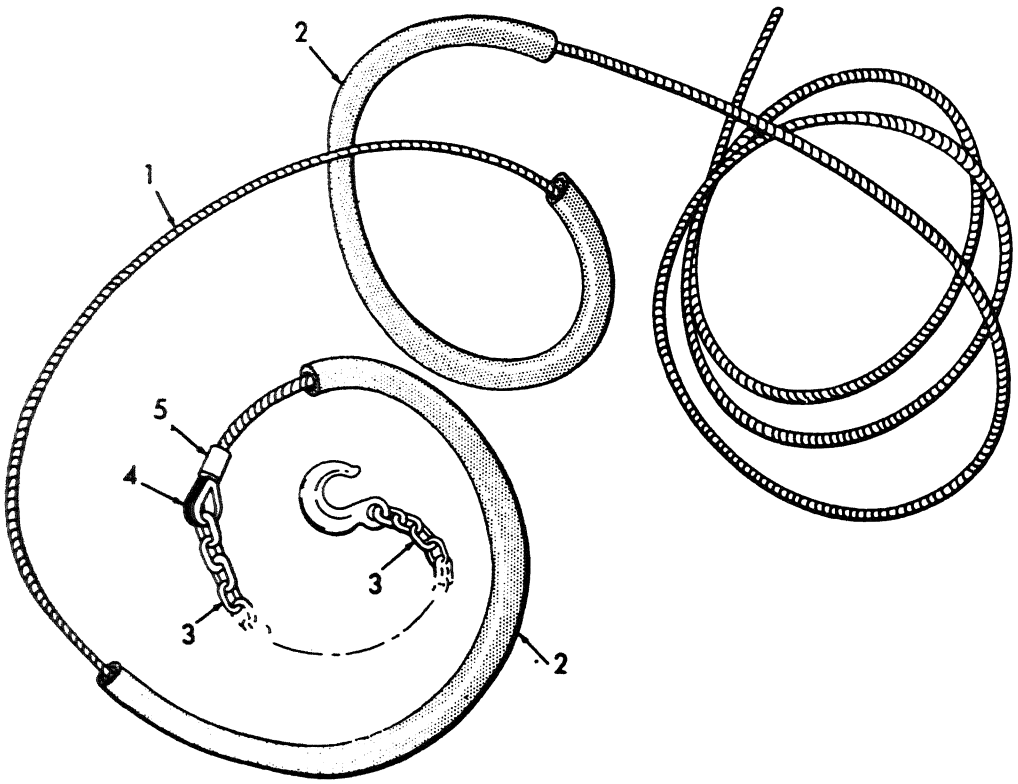
(4) Inspect the chain and hook for cracks, breaks, broken welds, or other damage. Repair or replace, as necessary.

(5) Inspect the thimble for cuts, breaks, separation, warpage, or other damage. Replace a damaged thimble.

d. Reassembly and Installation.

(1) Position the thimble (4) through the end link of the chain (3).

(2) Position the cable (1) through the link and around the thimble (4). Secure



1 Cable, ⅞ x 25 ft (2 rqr)
2 Cover, cable, 4 ft (2 rqr)
3 Chain and hook assembly
4 Thimble
5 Clamp, cable

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Figure 23. Rear winch cable.

the cable together with two cable clamps (5).

(3) Position the cable cover (2) on the cable (1).

Note. The covering for the side winch cables is 1 piece 10 feet long. For the rear winches, it is 2 pieces 4 feet long.

(4) Secure the cable to the winch drum (par. 52).

(5) Secure the cable (1) in its stored position. Operate the winch (par. 10) and tighten the cable.

54. Stowage Compartment Door

a. General. The stowage compartment is built in the rear of the stake body. It provides a storage place for the two ladders. The compartment door is mounted on the body with two hinges. The door is locked shut with a latch which is mounted on the door. The latch is secured in position by a snap. The snap and chain are mounted on the door with a machine screw, nut, and lockwasher.

b. Removal and Disassembly.

(1) Unhook the snap and chain assembly (5, fig. 11).

(2) Turn the latch (6) counterclockwise 45° and open the door (7).

(3) Remove the four cap screws (8), nuts, lockwashers, and the door (7). Remove the two hinges (3) from the door.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the door for bends, dents, breaks, or other damage. Repair or replace, as necessary.

(4) Inspect the hinge pin for alinement, binds, or broken welds. Repair or replace, as necessary.

(5) Inspect the snap and chain assembly for bends, cracks, breaks, or damaged links. Replace a damaged snap and chain assembly.

(6) Inspect the hinges for cracks, breaks, warpage, or other damage. Repair or replace, as necessary.

(7) Inspect the latch for breaks, cracks, warpage, excessive wear, or other damage. Repair or replace, as necessary.

Note. The nut that secures the latch to the door is spot welded to the latch. It will necessary to cut the nut off the latch.

d. Reassembly and Installation.

(1) Position the snap and chain assembly (5) on the door (7). Secure with the machine screw (4), the nut, and the lockwasher.

(2) Position the two hinges (3) on the door (7). Position the door on the body (2) and secure with the four cap screws (8), nuts, and lockwashers.

(3) Shut the door (7) and secure it with the latch (6). Lock the latch with the snap and chain assembly (5).

(4) Lubricate as instructed in paragraph 30.

55. Ladder Assemblies

a. General. The two ladders are stored in the stowage compartment in the rear of the stake body. Each ladder has a bracket welded on the rear of the frame on which to install them. The ladders when installed on the brackets are used by the personnel to climb on the stake. A brace is welded on the ladders to keep them from swinging under the body. This keeps the ladders in a straight vertical position.

b. Removal.

(1) Open the stowage compartment door (par. 54).

(2) Pull the top ladder (3, fig. 12) from the compartment.

(3) Pull the bottom ladder (3) from the compartment.

c. Cleaning, Inpsection, and Repair.

(1) Clean the ladders in an approved cleaning solvent and dry thoroughly.

(2) Inspect the ladder for bent, broken, or damaged rings. Repair or replace, as necessary.

(3) Inspect the side members of the lad-

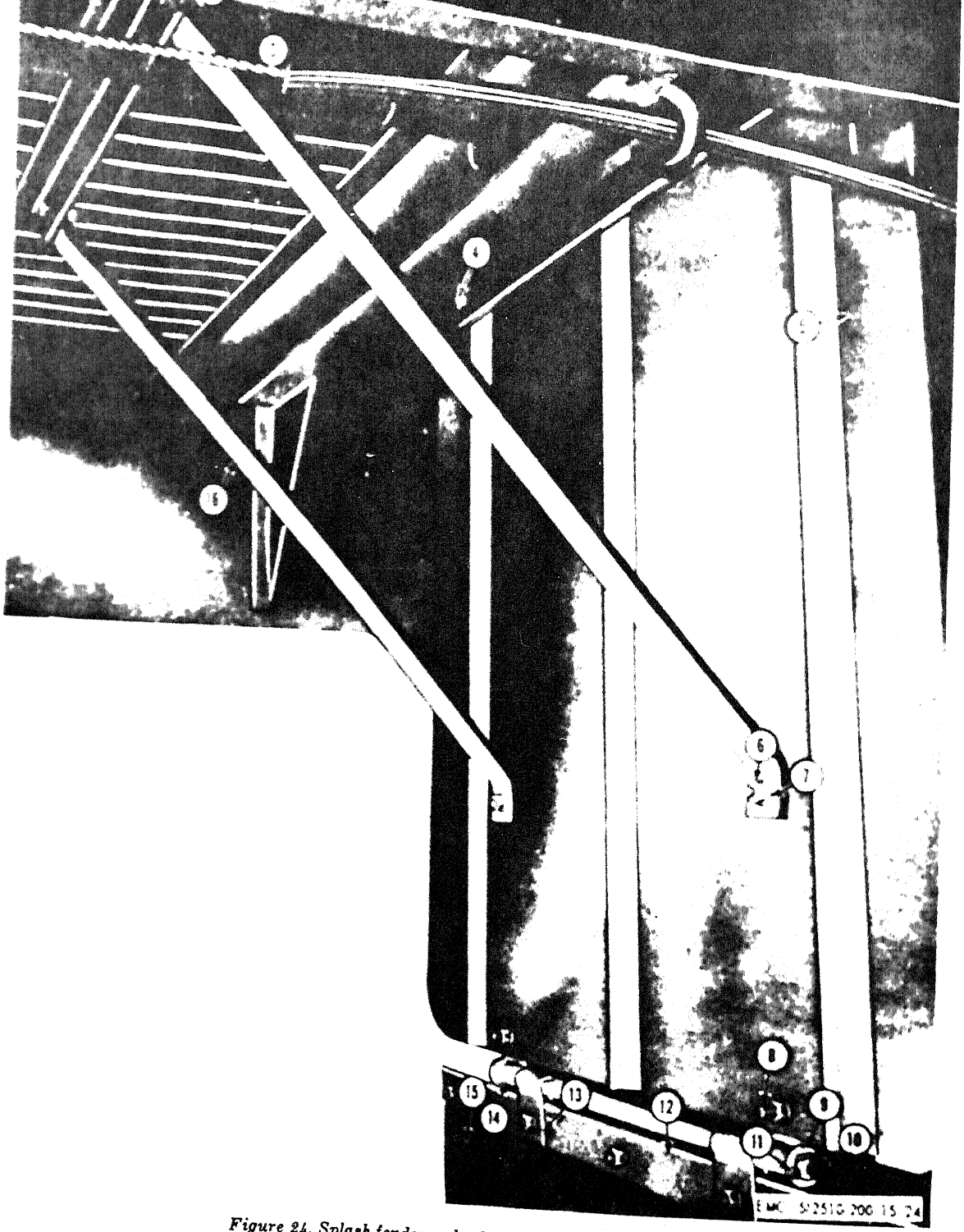


Figure 24. Splash fender and splash shield, installed view.

1 Bracket, fender mounting, W/A (2 rqr)
2 Cap screw, 3/8–16 x 1 1/4 in. (4 rqr)
3 Body, stake, bridging
4 Cap screw, 3/8–16 x 1 in. (4 rqr)
5 Fender, splash
6 Nut, plain, 3/8–16 (15 rqr)
7 Lockwasher, 3/8 in. (15 rqr)
8 Cap screw, 3/8–16 x 1 5/8 in. (7 rqr)
9 Flat washer, 3/8 id x 1 1/8 od x 1/8 in. thk (2 rqr)
10 Pin, hinge, 3/8 x 20 3/4 in.
11 Pin, cotter, 1/8 x 1 1/4 in. (2 rqr)
12 Support, splash shield
13 Hinge, splash shield (2 rqr)
14 Hinge, splash shield (2 rqr)
15 Shield, splash
16 Brace, splash fender (2 rqr)

Figure 24—Continued.

ders for breaks, bends, or other damage. Repair or replace, as necessary.

(4) Inspect the mounting hooks of the ladders for cracks, warpage, or broken welds. Repair or replace, as necessary.

d. Installation.

(1) Position one of the ladders (3) in the bottom support (5).

(2) Position the other ladder (3) in the top support (5).

(3) Close the stowage compartment door and lock it (par. 54).

56. Splash Shields and Fender Assemblies

a. General. The four splash shield fenders are mounted on the under side of the stake body, two at the front of the chassis rear wheels and two at the rear. The two rear splash fenders have hinged splash shields on the bottom of them. They are designed to throw foreign matter and water, thrown off by the tires, to the side and not on a trailing vehicle.

b. Removal and Disassembly.

(1) Remove the two cotter pins (11, fig. 24) and the two washers (9).

(2) Remove the pin (10) and the splash shield (15), from the splash fender (5).

(3) Remove the two cap screws (8), nuts (6), lockwashers (7), and hinges (14), from the splash fenders (5).

(4) Remove the five cap screws (8), nuts (6), lockwashers (7), the support (12), and the two hinges (13), from the splash shield (15).

(5) Remove the four cap screws (2), nuts (6), and lockwashers (7). Remove the two braces (16).

(6) Remove the four cap screws (4), nuts (6), and lockwashers (7). Remove the splash fender (5).

(7) Follow the above instructions to remove and disassemble the left rear splash fender and splash shield.

(8) To remove the two front splash fenders, follow the instructions in steps (5) and (6) above.

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean the cap screw threads with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the splash fenders for cracks, dents, warpage, or other damage. Repair or replace, as necessary.

(4) Inspect the braces for cracks, breaks, warpage, or other damage. Repair or replace, as necessary.

(5) Inspect the hinges for cracks, bends, warpage, or other damage. Repair or replace, as necessary.

(6) Inspect the splash shield for cuts or deterioration. Replace a damaged splash shield.

(7) Inspect the splash shield support for alinement, cracks, breaks, or other damage. Repair or replace, as necessary.

(8) Always use new cotter pins when installing the splash shields.

d. Reassembly and Installation.

(1) Position the splash fender (5) on the stake body (3), and secure with the four cap screws (4), nuts (6), and lockwashers (7).

(2) Secure the two braces (16) to the stake body (3) and the splash fender

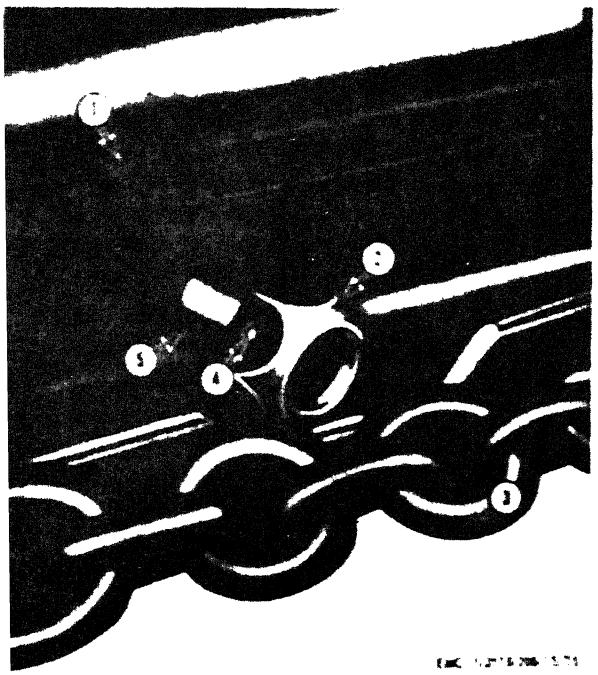
(3) Secure the two hinges (14) to the splash fender (5) with the two cap screws (8), nuts (6), and lockwashers (7).

(4) Position the splash shield (15) in the support (12). Position the two hinges (13) on the support. Secure together with the five cap screws (8), nuts (6), and lockwashers (7).

(5) Position the pin (10) through the four hinges (14, 13). Secure with the two flat washers (9) and two cotter pins (11).

(6) Follow the above procedure to install the left rear splash fender and splash shield.

(7) Follow steps (1) and (2) above to install the two front splash fenders.



1 Stake, body, left front
2 Nut, worm shaft, not threaded
3 Chain, winch cable
4 Pin, headless, grooved, ¼ x 1⅝ in.
5 Shaft, worm gear

Figure 25. Tire carrier drive shaft, installed view.

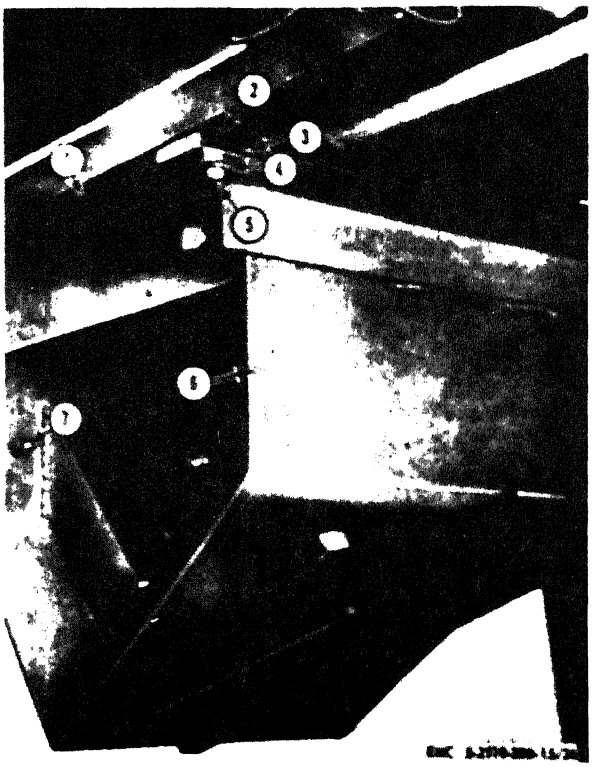
a. General. The spare wheel carrier is a winch type carrier, designed to raise and lower the spare wheel as desired. It is operated by a lug wrench. When the spare wheel is lifted in position, it is held there by two studs and nuts. The spare wheel carrier is mounted under the stake body on the left side at the front.

b. Removal and Disassembly.

(1) Remove the pin (4, fig. 25) and the nut (2) from the worm gear shaft (5).

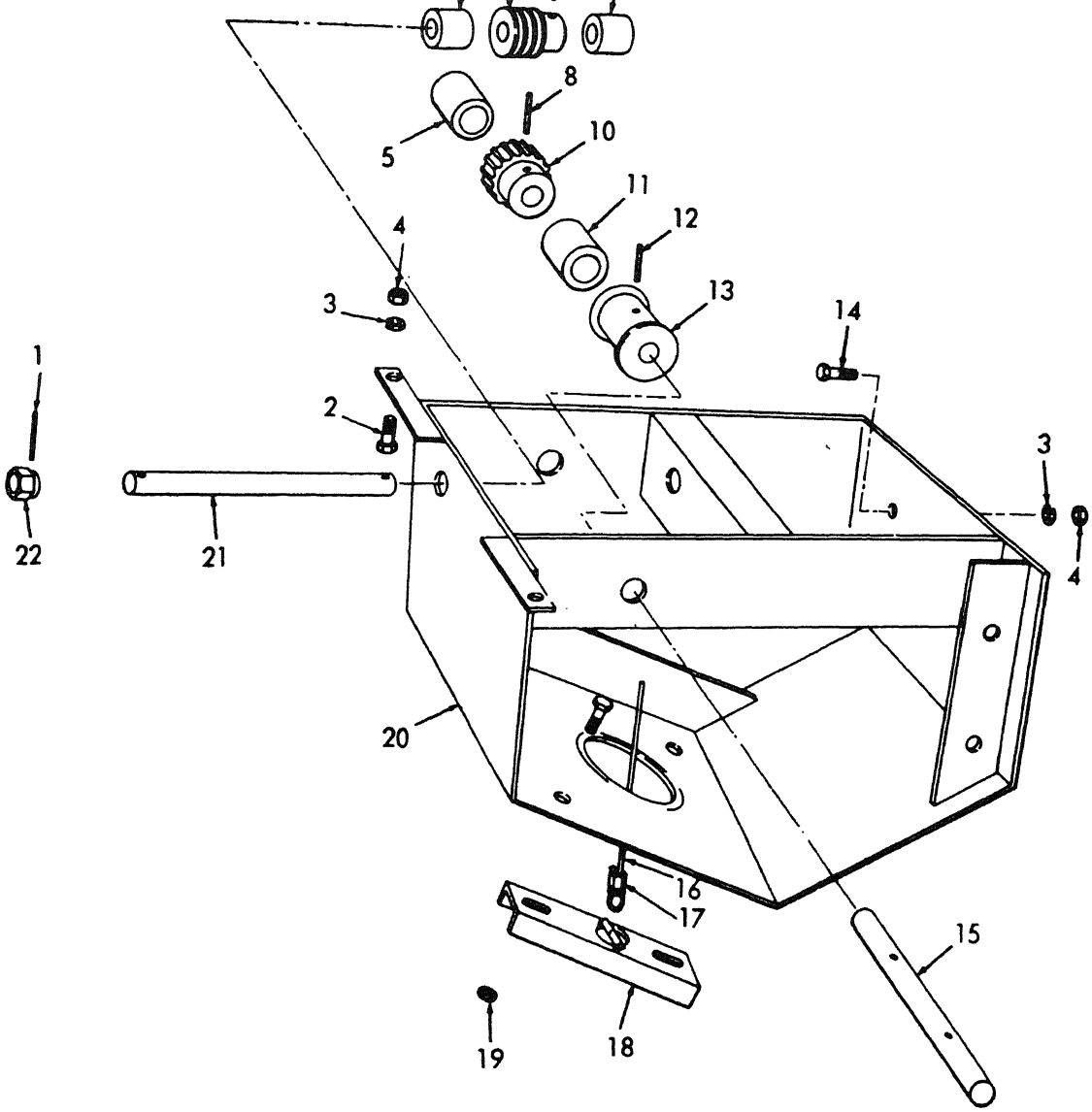
(2) Remove the four cap screws (7, fig. 26), nuts (5), and lockwashers (4).

(3) Remove the two cap screws (2), nuts (5), and lockwashers (4). Remove the



1 Stake body, left side
2 Cap screw, ½–20 x 1 in. (2 rqr)
3 Bracket, mounting (2 rqr)
4 Lockwasher, ½ in. (6 rqr)
5 Nut, plain, ½–20 (6 rqr)
6 Tire carrier assembly
7 Cap screw, ½–20 x 1¼ in. (4 rqr)

Figure 26. Tire carrier assembly, installed view.



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1 Pin headless, grooved, ¼ x 1⅝ in.
2 Cap screw, ½–20 x 1 in. (2 rqr)
3 Lockwasher, ½ in. (6 rqr)
4 Nut, plain, ½–20 (6 rqr)
5 Spacer
6 Spacer
7 Gear, worm
8 Pin, headless, grooved, ¼ x 1½ in. (2 rqr)
9 Spacer
10 Gear, wheel
11 Spacer
12 Pin, headless grooved, ¼ x ¾ in.
13 Drum, cable
14 Cap screw, ½–20 x 1¼ in. (4 rqr)
15 Shaft, wheel
16 Cable, ⅛ x 48 in.
17 Clamp, cable
18 Bracket, wheel retaining
19 Nut, rim, ¾–16 (2 rqr)
20 Rack assembly, tire carrier
21 Shaft, worm gear
22 Nut, worm shaft, not threaded

Figure 27. Tire carrier assembly, exploded view.

(5) Remove the pin (8) from the worm gear (7).

(6) Remove the shaft (21), the worm gear (7), and the two spacers (6, 9) from the rack assembly (20).

(7) Unwind the cable (16) off the drum (13). Use an acetylene torch to melt the solder and remove the cable from the drum.

(8) Remove the pin (8) from the wheel gear (10). Remove the pin (12), from the cable drum (13).

(9) Remove the shaft (16), the drum (13), the gear (10), and the two spacers (5, 11), from the rack assembly (20).

(10) Remove the cable clamp (17), and the cable (16), from the bracket (18).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean the cap screw threads and the gears with a stiff wire brush dipped in an approved cleaning solvent.

(3) Inspect the pins for excessive wear or other damage. Replace a damaged pin.

(4) Inspect the two shafts for alinement, burrs, elongated pin holes or other damage. Repair or replace shafts, as necessary.

(5) Inspect the cable drum and the spacers for cracks, breaks, burrs, or other damage. Repair or replace, as necessary.

(6) Inspect the gears for excessive wear, and chipped, broken, or cracked teeth. Replace a damaged gear.

(7) Inspect the bracket and the rack for cracks, dents, broken welds, warpage, or other damage. Repair or replace, as necessary.

(8) Inspect the cap screws and nuts for stripped or damaged threads. Replace all damaged hardware.

(9) Inspect the cable for frayed or broken strands. Replace a defective cable.

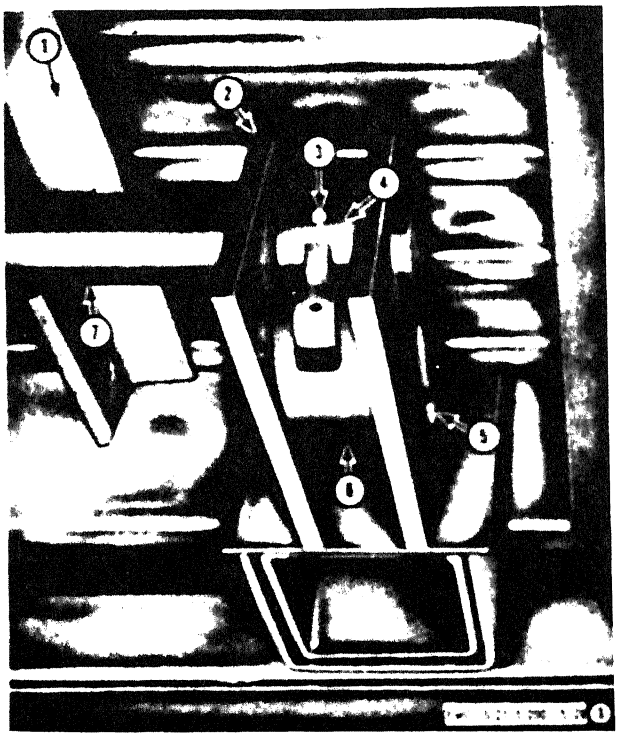
d. Reassembly and Installation.

(1) Position the cable (16) through the bracket (18). Secure the cable together with cable clamp (17).

(2) Insert the shaft (15) through the side of the rack assembly (20). Position the drum (13), the spacer (11), the gear (10), and the spacer (5) on the shaft (15).

(3) Slide the shaft in the other side of the rack assembly (20). Secure the gear (10) to the shaft (15) with the pin (8). Secure the drum (13) to the shaft with the pin (12).

(4) Insert the shaft (21) through the front of the rack assembly (20). In-



1 Bracket, splash fender brace
2 Bracket, lock mounting
3 Pin, grooved, headless, ¼ x 2 in.
4 Arm
5 Pin, latch, ¾ in. x 2½ in.
6 Latch
7 Lockshaft, No. 4, 1⅛ in. x 11¾ in.

Figure 28. Rear rack lock, installed view.

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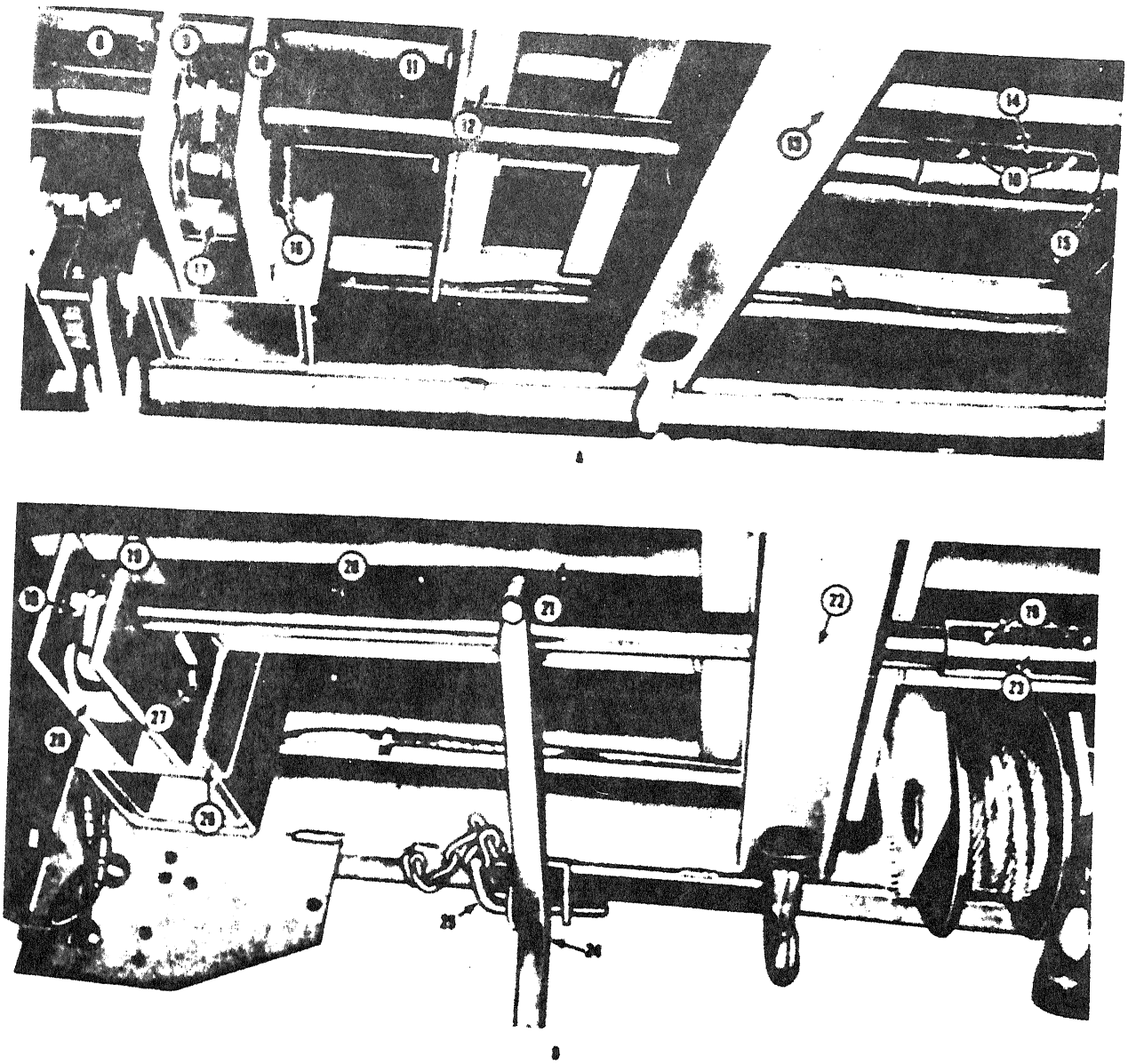


8 Bracket, lock mounting
9 Arm
10 Pin, grooved, headless, ¼ x 2 in. (3 rqr)
11 Lockshaft, No. 2, 1⅛ x 25¾ in.
12 Bracket, splash fender
13 Crossmember
14 Coupling, lockshaft
15 Lockshaft, No. 4, 1⅛ x 11¾ in.
16 Pin, latch, ¾ x 2½ in.
17 Latch
18 Arm
19 Pin, grooved, headless, ¼ x 2 in. (3 rqr)
20 Lockshaft, No. 1, 1⅛ x 25¾ in.
21 Body, stake, left rear
22 Crossmember
23 Coupling, lockshaft
24 Lever
25 Pin assembly
26 Bracket, lock mounting
27 Pin, latch, ¾ x 2½ in.
28 Latch

Figure 28.—Continued.

stall the spacer (6), the gear (7), and the spacer (9) on the shaft.

(5) Aline the teeth of the two gears (7, 10) and slide the shaft (21) in the rack assembly crossmember.

(6) Secure the gear (7) to the shaft (21) with the pin (8).

(7) Secure the cable (16) to the drum (13).

(8) Position the tire carrier (6, fig. 26)

(5), and lockwashers (4). Install and secure the two cap screws (2), nuts, and lockwashers.

(9) Install the nut (2, fig. 25) on the shaft (5). Secure the nut with the pin (4).

(10) Turn the shaft (5) until the bracket (18, fig. 27) is against the rack assembly (20).

(11) Lubricate as instructed in paragraph 30.

58. Stake Rack Lock Assembly

a. General. Each stake rack is provided with an individual locking system, operated by the hand lever under the side rail of the body. Pulling upward on the lever forces a cam action latch through the stake rack support and the stake rack. A pin assembly holds the lever in the locked position. The three latches are connected together with three lockshafts and two lockshaft couplings.

b. Removal and Disassembly.

(1) Remove the stake rack assemblies (par. 10).

(2) Remove the pin (3, 1, fig. 28) from the lockshaft (7) and the arm (4).

Note. The removal and disassembly procedure described here is for the left rear rack lock assembly. Remove the remaining rack locks in the same manner starting at the front of the assembly and removing the short lockshaft first.

(3) Remove the two pins (10, 2, fig. 28 A) from the coupling (14).

(4) Remove the pin (10) from the arm (9) and the lockshaft (11).

(5) Remove the two pins (19, 2, fig. 28 B) from the coupling (23).

(6) Remove the pin (19) from the arm (18) and the lockshaft (20).

(7) Slide the lockshaft (11, 2, fig. 28 A) and the coupling (14) to the rear as far as possible.

(8) Remove the No. 4 lockshaft (7, 1, fig. 28) from the bracket (2) and the arm (4).

(9) Remove the coupling (14, 2, fig. 28 A) bracket (26, 2, fig. 28 B) and the arm.

(10) Lower the rear end of the lockshaft (11, 2, fig. 28 A) and pull it to the rear out of the crossmember (13).

(11) Remove the coupling (23, 2, fig. 28 B) from the lockshaft (20). Slide the lockshaft forward, out of the bracket (26) and the arm (18).

(12) Lower the rear end of the lockshaft (20) and pull it to the rear out of the crossmember (22).

(13) Remove the pin securing the latch (6, 1, fig. 28) to the latch pin (5). Remove the latch pin, the latch, and the arm (4) from the bracket (2).

(14) Repeat the instructions in step (13) above and remove the arms, latches, and latch pins from the two remaining brackets (8, 2, fig. 28 A) and (26).

(15) Remove the three pins (10, fig. 29) from the arms (5) and the latches (12).

(16) Remove the cap screw (8) and the lockwasher (9) from the lever (14). Remove the lever and the key (7) from the No. 1 lockshaft (6).

c. Cleaning, Inspection, and Repair.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean the brackets and the cap screw threads with a stiff wire brush dipped in an approved cleaning solvent.

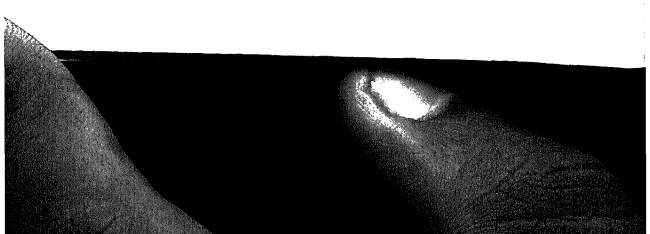
(3) Inspect the shafts for bends, warpage, or elongated pin holes. Replace a damaged shaft.

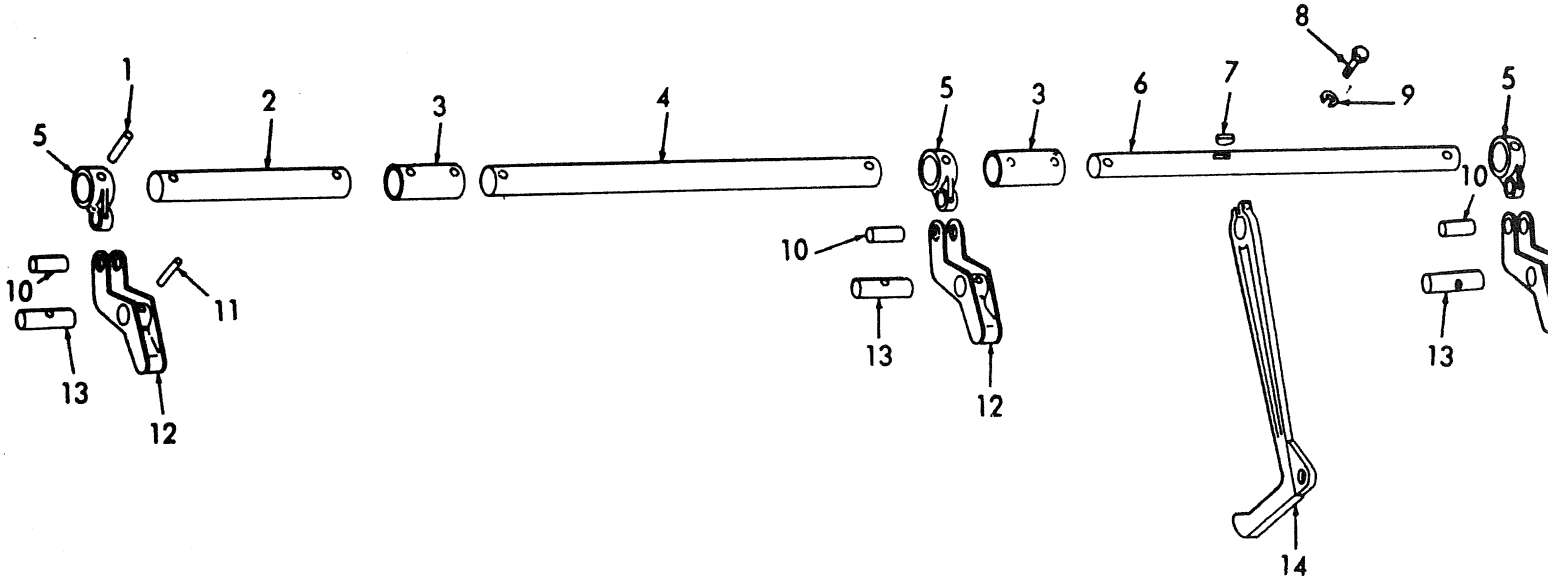
(4) Inspect the couplings, latches, arms, and the lever for cracks, breaks, excessive wear, or other damage. Replace all damaged parts.

(5) Inspect the arm pins and the latch pins for bends, out-of-round condition, or damaged ends. Replace all damaged pins.

(6) Always use new groove pins when installing the rack lock assembly.

(7) Inspect the mounting brackets for cracks, breaks, bends, or broken welds.





1 Pin, grooved, headless, ¼ x 2 in. (7 rqr)
2 Lockshaft, No. 4, 1⅛ x 11¾ in.
3 Coupling, lockshaft (2 rqr)
4 Lockshaft, No. 2, 1⅛ x 25¾ in.
5 Arm (3 rqr)
6 Lockwasher, No. 1, 1⅛ x 25¾ in.
7 Key, Woodruff, No. 11, 3/16 x ⅞ in.
8 Cap screw, ⅜–16 x 1¼ in.
9 Lockwasher, ⅜ in.
10 Pin, arm, ¾ x 1½ in. (3 rqr)
11 Pin, grooved, headless, 3/16 x 1½ in
12 Latch (3 rqr)
13 Pin, latch, ¾ x 2½ in. (3 rqr)
14 Lever

Figure 29. Rear rack lock (left side), exploded view.

(1) Position the key (4, fig. 29) in the No. 1 lockshaft (6). Slide the lever (14) on the lockshaft over the key. Secure with the cap screw (8) and the lockwasher (9).

(2) Secure the arm (5) to the latch (12) with the pin (10).

(3) Position the arm (4, 1, fig. 28) and the latch (6) in the bracket (2). Secure the latch to the bracket with the pin (5). Secure the pin to the latch (6) with the pin (11, fig. 29).

(4) Repeat the instructions in steps (2) and (3) above and install the two arms (5) and the two latches (12) in the two brackets (8, 2, fig. 28 A) and (26, 2, fig. 28 B).

(5) Insert the No. 1 lockshaft (20) through the crossmember (22) from the rear. Slide the lockshaft to the rear through the bracket (26) and the arm (18).

(6) Install the coupling (23) on the No. 1 lockshaft (20).

(7) Position the No. 2 lockshaft (11, 2, fig. 28 A) through the crossmember (13) from the rear. Slide the No. 2 lockshaft to the rear through the bracket (8) and the arm (9) and into the coupling (23, 2, fig. 28 B).

(8) Position the coupling (14, 2, fig. 28 A) on the end of the No. 2 lockshaft (11).

(9) Position the No. 4 lockshaft (7, 1, fig. 28) through the bracket (2) and the arm (4). Slide the No. 4 lockshaft to the rear into the coupling (14, 2, fig. 28 A).

(10) Secure the arm to the lockshaft (7, 1, fig. 28) with the pin (3).

(11) Secure the coupling (14, 2, fig. 28 A) to the two lockshafts (11, 15) with the two pins (10). Secure the arm (9) to the lockshaft (11) with the pin (10).

(12) Secure the coupling (23, 2, fig. 28 B) to the two lockshafts (15, 2, fig. 28 A),

59. Stake Body Assembly

a. General. The combination stake and platform body is of all steel construction, consisting of six removable stake racks, three on each side, and a bulkhead and bed section. On the bulkhead are two floodlight mounting brackets, the necessary handles and steps, a snatch block located in the center opening, and the serial numbers, Corps of Engineers, and the transportation data plates located on the lower left side. Brackets are also provided for the mounting of a pioneer kit. The body is mounted with tiedown bolts through brackets which are bolted to the truck chassis.

b. Removal.

(1) Disconnect the wiring harness (par. 46).

(2) Remove the eight cap screws (5, fig. 30), nuts (7), and lockwashers (6).

(3) Use a suitable lifting device and remove the stake body (1) from the chassis (2).

(4) Remove the two wood sills (9) from the chassis (2).

(5) Remove the 24 cap screws (4), nuts, and lockwashers. Remove the eight brackets (3) from the chassis (2).

c. Cleaning, Inspection, and Repair.

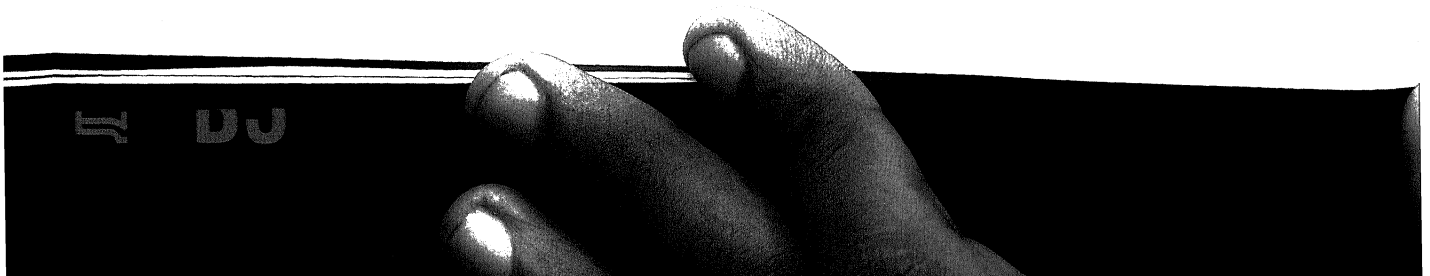
(1) Clean the frame with steam pressure and remove all dirt, paving materials, grit, grease deposits, and sludge from the frame.

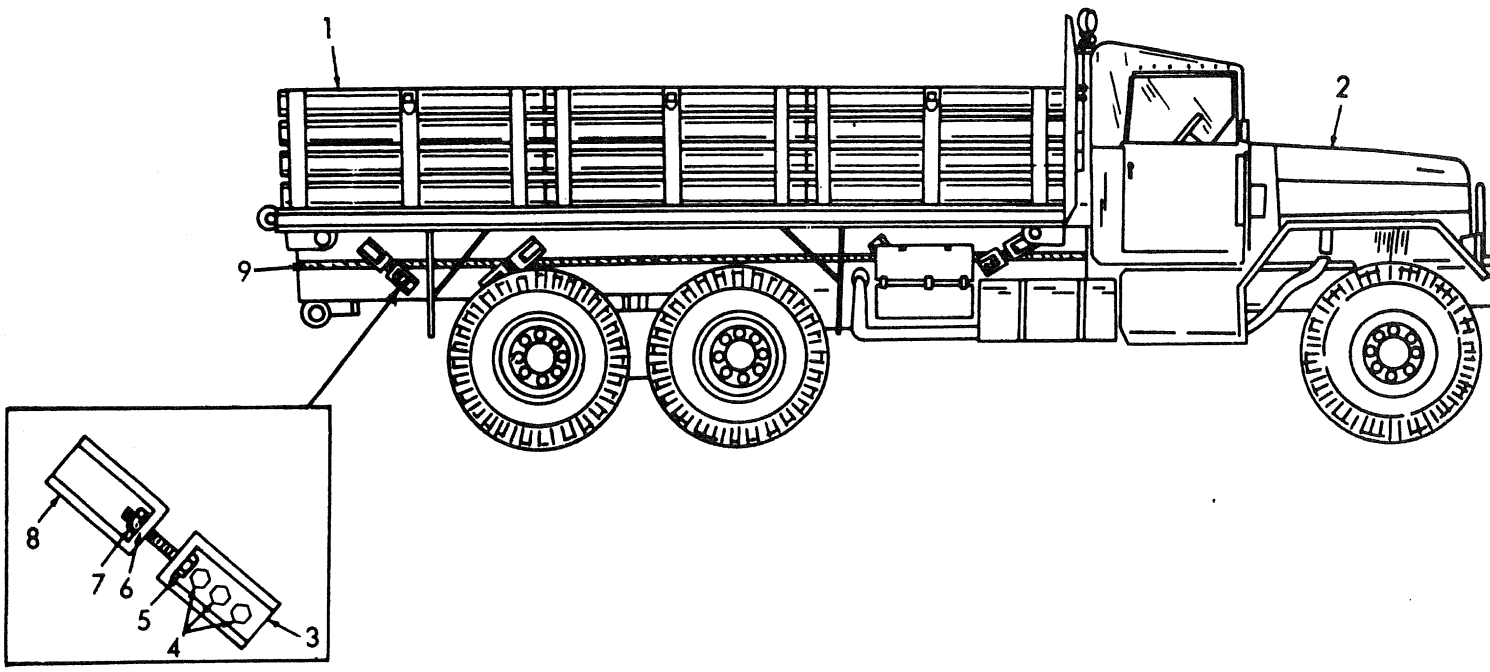
(2) Use a stiff wire brush dipped in an approved cleaning solvent to remove dirt and foreign matter from the frame corners, recesses, and welds. Clean all bolt threads.

(3) Remove all rust and corrosion with wire brushes and sanders.

(4) Use scrapers and chisels to remove the road tar and paving materials from the edges and corners of the frame members.

(5) Clean all welds with a wire brush until





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1 Body, stake
2 Chassis, truck, M139
3 Bracket, mounting (8 rqr)
4 Cap screw, ½–20 x 1¼ in. (24 rqr)
5 Cap screw, ¾–16 x 3½ in. (8 rqr)
6 Lockwasher, ¾ in. (8 rqr)
7 Nut, plain, ¾–16 (8 rqr)
8 Bracket, mounting, W/A (8 rq
9 Sill, wood, 1¾ x 2¾ x 18 ft 9 i

Figure 30. Stake body, installed view.

splitting. Inspect the welding seams for poor weld penetration, peeling heads and corrosion between the weld heads and the frame members. Report a damaged weld to the proper authority for repair.

(7) Inspect the crossmembers for twisting, warpage, cracks, or breaks. Report to the proper authority for repair.

(8) Inspect the bulkhead for cracks, breaks, dents, or other damage. Report damage to the proper authority for repair.

(9) Inspect the bed for cracks, breaks, dents, rough surface, or other damage. Report to the proper authority for repair.

(10) Inspect the handholds, mounting brackets, and lashing hooks, for cracks, breaks, bends, or broken welds.

for stripped or damaged threads. Replace all damaged hardware.

(12) Inspect the mounting brackets for cracks, breaks, twisting or other damage. Replace a damaged bracket.

(13) Inspect the wood sills for splitting, deterioration, breaks, or other damage. Replace a damaged sill.

d. Installation.

(1) Position the eight brackets (3) on the chassis (2). Secure with the 24 cap screws (4), nuts, and lockwashers.

(2) Position the two wood sills (9) on the chassis (2).

(3) Use a suitable lifting device and position the body (1) on the chassis (2). Secure with the eight cap screws (5), nuts (7), and lockwashers (6).

(4) Connect the wiring harness (par. 46).

Section I. TROUBLESHOOTING

60. General

This section provides information useful in diagnosing and correcting unsatisfactory operation or failure of the stake body and its components. Each trouble symptom stated is followed by a list of probable causes of the trouble. The possible remedy recommended is described opposite the probable cause.

61. Clearance Lights Fail to Operate

Probable cause	*Possible remedy*
Bulb burned out	Replace bulb (par. 45).
Wire disconnected	Secure connection (par. 45).
Wire cut or broken	Replace wiring harness (par. 46).

62. Tire Carrier Fails to Lift Wheel

Probable cause	*Possible remedy*
Cable loose on shaft	Secure cable to shaft (par. 57).
Pin broken	Replace pin (par. 57).

63. Rear Roller Fails to Roll

Probable cause	*Possible remedy*
Material between roller and body	Remove material (par. 48).
Roller bent	Replace roller (par. 48).
Defective bearing	Replace bearing (par. 70).
Bearing support damaged	Repair bearing support (par. 70).

64. Winches Fail to Operate

Probable cause	*Possible remedy*
Pin broke	Replace pin (par. 49).
Lever broke	Replace lever (par. 49).
Bracket bent	Replace or repair (par. 81, 82).

65. Rack Locks Fail to Operate

Probable cause	*Possible remedy*
Pin broke	Replace pins (par. 58).
Key broke or missing	Replace key (par. 58).
Shaft bent	Straighten shaft (par. 78).
Coupling bent	Straighten coupling (par. 78).

66. Snatch Block Inoperative

Probable cause	*Possible remedy*
Bent sheave pin	Straighten pin (par. 51).
Rivets out or loose	Replace rivets (par. 86).

67. Stake Body Out of Line

Probable cause	*Possible remedy*
Broken welds	Reweld (par. 94).
Bent crossmembers	Straighten crossmembers (par. 94).

Section II. REAR ROLLER ASSEMBLY

68. Rear Roller Assembly Description

The roller is hollow and has a shaft and shaft support welded in each end of it. A grease seal and a roller bearing are pressed on each shaft. The bearing caps have shims under them to adjust the roller end play.

69. Rear Roller Assembly Removal and Disassembly

a. Removal. Remove the roller assembly (par. 48).

b. Disassembly.

(1) Remove the six cap screws (6, fig. 17), lockwashers (5), and the bearing cap (4), from the left-hand bearing support (7).

(2) Follow the above instructions and remove the bearing cap from the right-hand bearing support.

(3) Remove the two lubrication fittings (14, fig. 31) from the two bearing caps (13).

(4) Remove the shims (11, 12) from the bearing caps (13).

Note. There are four 0.016-inch and two 0.032-inch shims under each bearing cap.

(5) Use a suitable puller and remove the two bearings (5) from the two shafts (9).

(6) Remove the two oil seals (6) from the shafts.

70. Rear Roller Assembly Cleaning, Inspection, and Repair

a. Cleaning.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Clean all threads with a stiff wire brush dipped in an approved cleaning solvent.

b. Inspection and Repair.

(1) Inspect the bearing caps and the bearing supports for cracks, breaks, or other damage. Repair or replace caps and supports, as necessary.

(2) Inspect the shims for cuts or breaks. Replace all damaged shims.

(4) Inspect the roller and the shafts for cracks, breaks, excessive wear, or other damage. Replace or repair roller and shafts as necessary.

Note. The roller, the shaft, and the shaft supports are welded together and are not individually replaceable. The entire roller assembly must be replaced as a unit.

(4) Inspect the bearings for scoring, galding, and free rotation. Replace a defective bearing.

(5) Inspect the lubrication fittings for damaged threads, clogged passage, or other damage. Replace a defective lubrication fitting.

(6) Inspect the cap screws for stripped or damaged threads. Replace all damaged hardware.

(7) When installing the roller assembly always use new oil seals.

71. Rear Roller Assembly Reassembly and Installation

a. Reassembly.

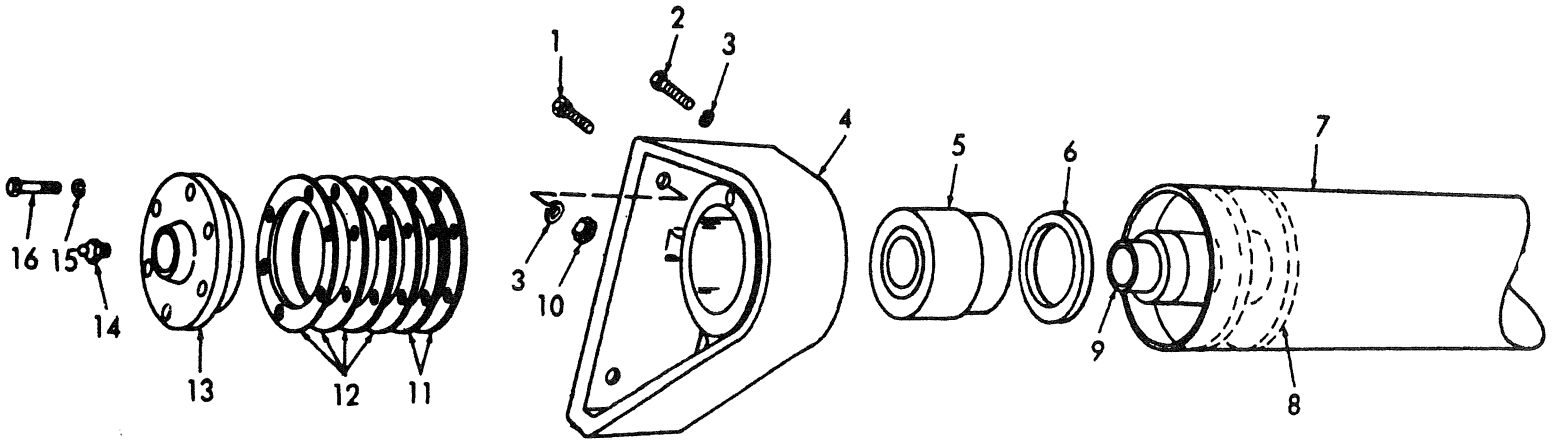
(1) Install the two oil seals (6, fig. 31) and two bearings (5) on the shafts (9).

(2) Position the four 0.016 inch shims (12) and the two 0.032 inch shims (11) on each bearing cap (13).

(3) Secure the two bearing caps (13) to the two bearing supports (4) with the 12 cap scraws (16) and lockwashers (15).

(4) Install the two lubrication fittings (14) in the two bearing caps (13).

b. Installation. Install the roller assembly on the stake body (par. 48).



1 Cap screw, ⅝–18 x 2 in. (6 rqr)
2 Cap screw, ⅝–18 x 1¼ in. (2 rqr)
3 Lockwasher, ⅝ in. (8 rqr)
4 Support, bearing, lh
5 Bearing (2 rqr)
6 Seal, oil (2 rqr)
7 Roller assembly
8 Shaft support (2 rqr)
9 Shaft (2 rqr)
10 Nut, plain, ⅝–18 (6 rqr)
11 Shim, 0.032 in. thk (4 rqr)
12 Shim, 0.016 in. thk (8 rqr)
13 Cap, bearing (2 rqr)
14 Fitting, lubrication, ⅛–27 (2 rqr)
15 Lockwasher, ⅜ in. (12 rqr)
16 Cap screw, ⅜–16 x 1¼ in. (12 rqr)

Figure 31. Rear roller assembly, exploded view.

Section III. STAKE RACK ASSEMBLIES

72. Stake Rack Assemblies Description

The stake racks consist of four crossmembers that are welded to three upright stakes. The top crossmember has a female interlock plate welded on one end, and a male interlock plate welded on the other end. The center stake has a lashing ring welded near the top.

73. Stake Rack Assembly Removal

Remove the stake rack assemblies (par. 10).

74. Stake Rack Assemblies Cleaning, Inspection, and Repair

a. Cleaning.

(1) Clean the stake racks with a suitable steam pressure unit.

(2) Use a stiff wire brush dipped in an approved cleaning solvent to remove foreign matter and road tar from the stake racks.

b. Inspection and Repair.

(1) Inspect the crossmembers of the racks for cracks, broken welds, breaks, bends, or other damage. Repair or replace crossmembers, as necessary.

(2) Inspect the interlock plates for cracks, bends, broken welds, or other damage. Repair or replace plates, as necessary.

(3) Inspect the stakes for breaks, bends, dents, broken welds, or other damage. Repair or replace stakes as necessary.

(4) Inspect the lashing ring and bracket for breaks, bends, cracks, or other damage. Repair or replace as necessary.

75. Stake Rack Assemblies Installation

Install the stake racks (par. 10).

Section IV. STAKE RACK LOCK ASSEMBLIES

76. Stake Rack Lock Assemblies Description

Each rack lock assembly consists of three shafts and two couplings. They are held together by grooved pins. The shafts are also attached to the actuating arms by pins. The operating lever is secured to the shaft with a key and a cap screw.

77. Stake Rack Lock Assemblies Removal and Disassembly

a. Removal. Remove the stake rack lock assemblies (par. 58).

b. Disassembly. Disassemble the stake rack lock assemblies (par. 58).

78. Stake Rack Lock Assemblies Cleaning, Inspection, and Repair

a. Cleaning.

(1) Clean all parts in an approved cleaning solvent and dry thoroughly.

(2) Use a stiff wire brush dipped in an approved cleaning solvent and clean the brackets and the shaft keyways.

b. Inspection and Repair.

(1) Inspect the shafts for breaks, cracks, and twisting. Check the keyway edges for broken, chipped, or pitted metal. Repair or replace as necessary.

(2) Inspect the brackets for breaks, twisting, cracks, broken welds, or other damage. Repair or replace as necessary.

(3) Inspect the couplings for cracks, bends, breaks, or other damage. Repair or replace as necessary.

(4) Inspect the latch and the arms for cracks, breaks, elongated pin holes, or other damage. Replace as necessary.

(5) Inspect the lockpin and the lever for bends, breaks, or twisting. Repair or replace as necessary.

(6) Use new groove pins when installing the stake rack lock assemblies.

79. Stake Rack Lock Assemblies Reassembly and Installation

a. Reassembly. Reassemble the stake rack lock assembly (par. 58).

b. Installation. Install the stake rack lock assemblies (par. 58).

Section V. WINCH ASSEMBLIES, REAR SIDE

80. Winch Assemblies, Rear Side Description

The rear side winches are the same as the front side winches with the exception of their location. They are mounted between the rear crossmembers and the stake rack pocket. Due to the limited space, it will be necessary to cut the mounting brackets from the body with a cutting torch to remove the winch assembly.

81. Winch Assemblies, Rear Side Removal and Disassembly

a. Removal.

(1) Remove the cable from its stored position in the side rail gutter.

(2) Use a cutting torch and remove the two brackets (3, 8, fig. 21) from the stake body (2).

Note. Measure the brackets before removing them as new ones will have to be fabricated. Use caution not to cut through the stake body or the rack pockets.

b. Disassembly. Disassemble the winch assembly (par. 52).

82. Winch Assemblies Rear Side Cleaning, Inspection, and Repair

a. Cleaning. Clean the winch assembly (par 52).

b. Inspection and Repair.

(1) Inspect and repair the winch assemblies (par. 52).

(2) Use a grinder to smooth the ridges on the stake body left by the cutting torch.

83. Winch Assemblies Rear Side Reassembly and Installation

a. Reassembly. Reassemble the winch assembly (par. 52).

b. Installation.

(1) Position the winch assembly in place on the stake body.

(2) Weld the brackets (3, 8, fig. 21) securely to the stake body (2).

(3) Secure the cable in its stored position in the side rail gutter.

Section VI. SNATCH BLOCK ASSEMBLY

84. Snatch Block Assembly Description

The snatch block assembly consists of a hook, a latch, two straps, and a pulley. The two straps, riveted to the body, are attached to the latch and the hook. The pulley, located in the body, is secured with a bolt and nut.

85. Snatch Block Assembly Removal and Disassembly

a. Removal. Remove the snatch block assembly (par. 51).

b. Disassembly. Disassemble the snatch block assembly (par. 51).

86. Snatch Block Assembly Cleaning, Inspection, and Repair

a. Cleaning. Clean the snatch block assembly (par. 51).

b. Inspection and Repair.

(1) Inspect the straps for cracks, breaks, excessive wear, or twisting. Repair or replace straps, as necessary.

(2) Inspect the body for cuts, breaks, or twisting. Repair or replace as necessary.

(3) Check all rivets to see if they are tight. Tighten or replace the rivets, as necessary.

(4) Inspect the latch for breaks, bends, or excessive wear. Repair or replace as necessary.

(5) Inspect the hook assembly for cracks, breaks, warpage, and free rotation. Repair or replace as necessary.

87. Snatch Block Assembly Reassembly and Installation

a. Reassembly. Reassemble the snatch block assembly (par. 51).

b. Installation. Install the snatch block assembly (par. 51).

Section VII. DATA PLATES

88. Data Plates Description

The Corps of Engineers data plate and the transportation data plates are secured in place with drive screws. The serial number plate is welded to the stake body.

89. Data Plates Removal

a. Corps of Engineers Data Plate. Use a suitable punch and remove the four drive screws and the plate (fig. 3A).

b. Transportation Data Plate. Use a suitable punch and remove the four drive screws and the plate (fig. 3B).

c. Serial Number Plate. Use a cutting torch and remove the plate (fig. 3C).

Note. Use care not to cut through the stake body or the plate.

90. Data Plates Cleaning, Inspection, and Repair

a. Cleaning. Clean the data plates with a cloth dampened in an approved cleaning solvent.

b. Inspection and Repair.

(1) Inspect the data plates for bends, cracks, and legibility. Repair or replace plates, as necessary.

(2) Use the proper size stamps and transfer the data from the old plate onto the new one.

Note. Be sure the information is transferred correctly.

(3) Use new drive screws when installing the plates.

91. Data Plates Installation

a. Corps of Engineers Data Plate. Position the plate on the stake body. Secure the plate with the four drive screws.

b. Transportation Data Plate. Position the plate on the stake body. Secure the plate with the four drive screws.

c. Serial Number Plate. Position the plate on the body. Spot weld it to the body.

Section VIII. STAKE BODY ASSEMBLY

92. Stake Body Assembly Description

The stake body is all welded construction. The main members, the bulkhead, the bed, and the reinforcing members, are made of heavy gage sheet steel. The body is designed to withstand heavy stresses and will seldom require repair.

93. Stake Body Assembly Removal

Remove the stake body from the chassis (par. 59).

94. Stake Body Assembly Cleaning, Inspection, and Repair

a. Cleaning. Clean the stake body (par. 59).

b. Inspection and Repair.

(1) Inspect the stake body (par. 59).

(2) Weld all broken welds.

(3) Inspect the body for dents. Pound out all dents.

(4) Inspect the body and the body crossmembers for twisting. Straighten all bent or twisted parts.

(5) All breaks and cracks in the frame members and crossmembers must be reinforced and electrically welded.

(6) Clean the metal thoroughly around the crack or break. Check the length of the crack and drill a small hole about ½ to 1 inch beyond the visible end of the crack. This hole will prevent the crack from running when heat is applied.

(7) Use an acetylene torch to preheat the metal around the crack to about 200° F.

(8) Weld the crack by the arc-welding method. Allow the weld to cool slowly. Clean the weld and spatter. Check the weld head for proper penetration. Reinforce the frame member by welding a reinforcing plate over the crack.

95. Stake Body Assembly Installation

Install the stake body on the chassis (par. 59).

CHAPTER 5
SHIPMENT AND LIMITED STORAGE

Section I. SHIPMENT WITHIN ZONE OF INTERIOR

96. Preparation of Equipment for Shipment

a. Inspection. Inspect the stake body to determine its condition in accordance with paragraph 11. Repairs will be made and any deficiencies will be corrected prior to shipment.

b. Servicing.

(1) Perform the preventive maintenance services (par. 36).
(2) Lubricate the stake body (par. 30).
(3) Remove the floodlights and the snatch block and store them in the toolbox.

c. Installation of Preservatives.

(1) Install waterproof tape on the reflectors.
(2) Install waterproof tape on the clearance lights and blackout lights.

97. Loading Equipment for Shipment

a. General. When the stake body is to be shipped within the zone of interior it may be loaded on the carrier with cables and a suitable lifting device or it may be mounted on the truck and driven on the carrier with the use of a suitable ramp.

b. Loading with a Lifting Device.

(1) Attach the lifting cables to the lifting hooks (2, fig. 5) on the front bumper and in the bumpers on the rear of the chassis (8).
(2) Hook the cables securely and install spreader bars to avoid damage.
(3) Make sure there is plenty of clearance and lift the truck (1) to the platform of the flatcar (4).

c. Loading Ramp. If neither a suitable ramp or lifting device is available, a loading ramp must be constructed, as illustrated in figure 6. For standard carpentry procedures refer to TM 5–226. In an emergency, railroad cross ties or logs may be substituted, provided they are properly stabilized to prevent rolling or shifting.

d. Installation.

(1) Install the blocking (5, fig. 5) in front and back of the wheels.
(2) Install blocks (6) on the outside of the wheels.
(3) Install the tie-down wires (3).

Section II. LIMITED STORAGE

98. Preparation of Equipment for Storage

a. General. When the stake body is to be stored or left standing for a long period of time, definite procedures will be followed to prevent damage or trouble when it is again placed in operation. For the chassis refer to TM 9–8028.

b. Cleaning, and Drying. Clean all surfaces of the stake body with an approved cleaning solvent. Dry all parts thoroughly.

Caution: **Solvents must not be used on rubber products such as natural rubber hose and electrical insulation.**

c. Painting. On areas or portions of the stake body which are to be painted, sand the surrounding areas until the old finish "feather-edges" into the bare surface. Repaint, using paint materials of the same quality and color as those removed. TM 9–2851 provides painting instructions for field use.

d. Exterior Surfaces. Coat precision machined surfaces with preservatives or cover with greaseproof barrier material.

e. Lubrication. Lubricate the stake body (par. 30). Points of lubrication which incorporate

seals will be given particular attention to prevent seals from being forced open.

99. Inspection and Maintenance of Equipment in Storage

a. Limited Storage. When the stake body, truck mounted, has been placed in limited storage, all scheduled preventive maintenance services will be suspended and will be performed as specified herein.

b. Inspection Intervals. All stake bodies, truck mounted, in limited storage will be inspected every 30 days for any unusual condition such as damage, rusting, rotting, pilferage, or accumulation of water.

c. Worksheet and Preventive Maintenance. DA Form 464 (Work Sheet for Preventive Maintenance and Technical Inspection of Engineer Equipment) will be executed on each major item of equipment, and each group of minor items of equipment when equipment is initially placed into limited storage and every 30 days thereafter. Required maintenance will be performed promptly to insure that the equipment is mechanically sound and ready for immediate use.

d. Preservation.

(1) *Limited storage.* Stake bodies, truck mounted, in limited storage will be given only limited preservation as specified herein. The stake body will be stored so as to provide independent access to each item.

(2) *Storage site.* Personnel must carefully note the storage location to determine whether the location is adequate for the units involved. Store all stake bodies, truck mounted, in a suitable shed or building where possible. Where no suitable building is available, cover the entire unit with a tarpaulin. Stake bodies, truck mounted, stored outside will be protected by temporary seals or covers on all vulnerable openings.

CHAPTER 6
DEMOLITION OF STAKE TRUCK BODY TO PREVENT ENEMY USE

100. General

When capture or abandonment of the stake body, truck mounted, to an enemy is imminent, the responsible unit commander must make the decision either to destroy the equipment or to render it inoperative. Based on this decision, orders are issued which cover the desired extent of destruction. Whatever method of demolition is employed, it is essential to destroy the same vital parts of all stake bodies, truck mounted, and all corresponding repair parts in the critical area. For demolition of the truck chassis refer to TM 9–8028.

101. Demolition To Render the Stake Body Inoperative

a. Demolition by Mechanical Means. A sledge is the preferred tool, but picks, axes, pry-bars, rocks, or any heavy tools or objects which are readily available to destroy the following may be used:

(1) All accessories such as lights, rear roller, winches, snatch block, reflectors, racks, toolbox, ladders, and rack locks

(2) Cut or smash all castings such as the mounting brackets, bearing housings, fender brackets, and winch handles.

b. Demolition by Mis-Use.

(1) Cut all cables and electrical wiring.

(2) Run the stake body, truck mounted, into a rock or solid object.

(3) Run the stake body, truck mounted, over a cliff.

102. Demolition by Explosives or Weapons Fire

a. Demolition by Explosives. Place as many of the following charges (fig. 32) as the situation permits and detonate them simultaneously with a detonating cord and a suitable detonator.

(1) Place a 2-pound charge at two different locations on each side of the frame.

(2) Place a 1-pound charge on each winch.

(3) Place a 1-pound charge in the ladder compartment.

(4) Place a 1-pound charge in the tire carrier.

(5) Place a 1-pound charge in the toolbox.

(6) Place two ½-pound charges on each rack lock assembly.

(7) Place two 1-pound charges at the bottom of the bulkhead.

b. Demolition by Weapons Fire. Fire on the stake body with the heaviest weapon practical.

103. Other Demolition Methods

Totally submerge the unit in a body of water to provide concealment and water damage. Salt water will do the most damage.

104. Training

All operators should receive thorough training in the destruction of the stake body. Refer to FM 5–25. Simulated destruction, using all of the methods listed above, should be included in the operators training program. It must be emphasized in training, that demolition operations are usually necessitated by critical situations when time available for destruction is limited. For this reason, it is necessary that operators be thoroughly familiar with all methods of destruction and be able to carry out demolition instructions without reference to this or any other manual.

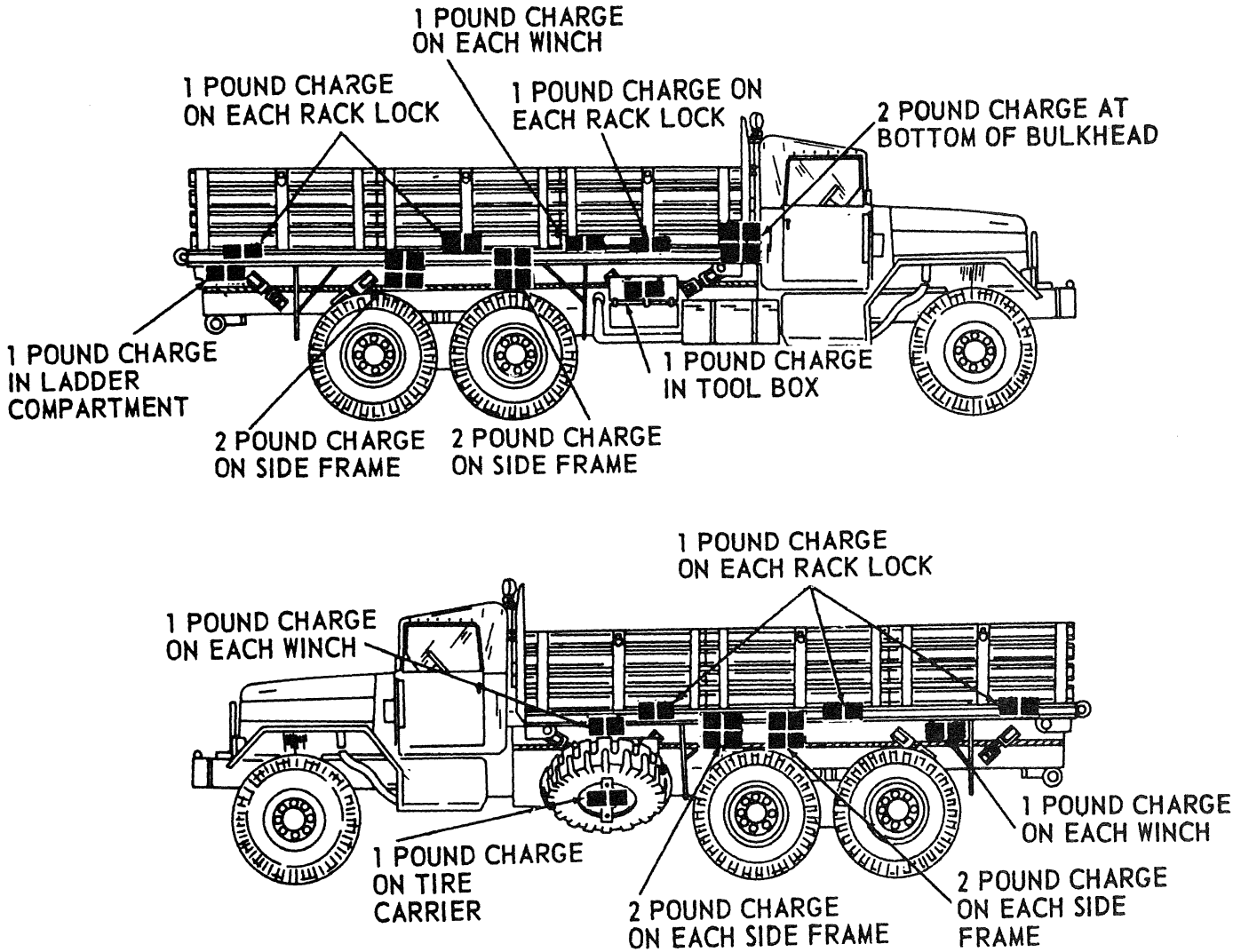


Figure 32. Placement of demolition charges.

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APPENDIX I
REFERENCES

1. Dictionaries of Terms and Abbreviations

SR 320–5–1	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations.

2. Fire Protection

TM 5–687	Inspection and Preventive Maintenance Services for Fire Protection Equipment and Appliances.
TM 9–1799	Ordnance Maintenance: Fire Extinguishers.

3. Painting

TM 9–2851	Painting Instructions for Field Use.

4. Preventive Maintenance

AR 750–5	Maintenance Responsibilities and Shop Operations.
TM 5–505	Maintenance of Engineer Equipment.
TM 9–8028	Operation and Organizational Maintenance, 5-ton, 6x6.

5. Publication Indexes

DA Pam 108–1	Index of Army Motion Pictures, Television Recordings, and Film-Strips.
DA Pam 310–1	Index of Administrative Publications.
DA Pam 310–2	Index of Blank Forms.
DA Pam 310–3	Index of Training Publications.
DA Pam 310–4	Index of Technical Manuals, Technical Regulations, Technical Bulletins, Lubrication Orders, and Modification Work Orders.
DA Pam 310–5	Index of Graphic Training Aids and Devices.
DA Pam 310–25	Index of Supply Manuals—Corps of Engineers.

6. Supply Publications

TM 5–2510–200–15P	Operator's, Organizational, Field, and Depot Maintenance Repair Parts List.

7. Training Aids

FM 5–25	Explosives and Demolition.
FM 21–5	Military Training.
FM 21–30	Military Symbols.

APPENDIX II
MAINTENANCE ALLOCATION CHART

1. General

This Maintenance Allocation Chart lists all maintenance and repair operations authorized for the various echelons.

2. Maintenance

Maintenance is any action taken to keep materiel in a serviceable condition or to restore it to serviceability when it is unserviceable. Maintenance of materiel includes the following:

a. Service. To clean, to preserve, and to replenish the fuel and lubricants.

b. Adjust. To regulate periodically to prevent malfunction.

c. Inspect. To verify serviceability and to detect incipient mechanical failure by scrutiny.

d. Test. To verify serviceability and to detect incipient mechanical failure by use of special equipment such as gages, meters, and so on.

e. Replace. To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.

f. Repair. To restore to a serviceable condition by replacing unserviceable parts or by any other action required utilizing tools, equipment, and skills available, to include welding, grinding, riveting, straightening, adjusting, and so on.

g. Rebuild. To restore to a condition comparable to new by disassembling the item to determine the condition of each of its component parts and reassembling it, using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

3. Explanation of Columns

a. Functional Group. The functional group is a numerical group set up on a functional basis. The applicable functional grouping indexes are taken from the Corps of Engineers Functional Grouping Indexes, and appear on the Maintenance Allocation Chart in their correct numerical sequence. These indexes are normally set up according to the proximity to each other and their function.

b. Components and Related Operation. This column contains the functional index group heading, subgroup headings, and a brief description of the part starting with the noun name. It also designates the operations to be performed such as service, adjust, inspect, test, replace, and rebuild.

c. Echelon of Maintenance.

(1) *Column 1, first echelon.* First echelon maintenance is that maintenance performed by the user or operator of the equipment, such as servicing, cleaning, lubricating, and limited adjustments. It also includes removal and replacement of items to accomplish servicing and lubrication.

(2) *Column 2, second echelon.* Second echelon maintenance is that maintenance performed by trained personnel provided for that purpose in the using organization, such as replacement of all items in column 2, limited parts fabrication from bulk material, adjustments, and repair of assemblies, components, and items that can be accomplished without extensive disassembly.

(3) *Column 3, third echelon.* Third echelon maintenance is that maintenance performed by specially trained units in direct support of the using organization, such as replacement of all items in columns 2 and 3, repair of assemblies, components, and end items, and fabrication of parts from bulk material.

(4) *Column 4, fourth echelon.* Fourth echelon maintenance is that maintenance performed by units organized as semi-fixed or permanent shops to serve lower echelon maintenance within a geographical area, such as replacement of items in columns, 2, 3 and 4, repair of end items, rebuild of assemblies and components, and fabrication of general use common hardware and parts.

(5) *Column 5, fifth echelon.* Fifth echelon maintenance is that maintenance authorized for rebuilding assemblies, components, and end items, and replacement of all parts in columns 2, 3, 4, and 5.

(6) *Symbol "X".* The symbol "X" indicates the lowest echelon responsible for performing that particular maintenance operation, but does not necessarily indicate repair parts will be stocked at that level.

d. Remarks. The remarks column is used to explain why maintenance, that would normally be done at a lower echelon, is moved to a higher echelon because of some peculiarity in the construction of the end item.

Maintenance Allocation Chart

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
	BODY, STAKE: Steel and Wood, for Mounting on ORD M-139 Chassis (all makes and models) FSN 2510-510-5191. Component of 2320-200-1682 Truck, Bridging.						
06	ELECTRICAL SYSTEM (ENGINE AND VEHICULAR)						
0609.1	HEAD, TAIL AND MARKER LIGHTS						
	MARKER LIGHTS						
	Inspect	X					
	Replace		X				
	Repair		X				
0609.2	ADDITIONAL LIGHTS						
	FLOODLIGHTS						
	Inspect	X					
	Replace		X				
	Repair		X				
0613	HULL OR CHASSIS WIRING HARNESS						
	Inspect	X					
	Replace		X				
	Repair		X				
15	FRAME						
1501.3	BUMPER, GUARDS, ROLLERS						
	REAR ROLLER						
	Inspect	X					
	Replace		X				
	Repair			X			
1504	SPARE WHEEL CARRIER AND TIRE LOCK						
	Inspect	X					
	Replace		X				
	Repair		X				

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
17	BODY; CAB; HOOD; HULL						
1701.1	FENDERS, SANDSHIELDS, RUNNING BOARDS						
	SANDSHIELDS						
	Inspect	X					
	Replace		X				
	Repair		X				
1701.2	MOUNTING AND ATTACHING PARTS						
	Inspect	X					
	Replace		X				
1708	STOWAGE RACKS, BOXES, STRAPS						
	Inspect	X					
	Replace		X				
	Repair		X				
1710	CARGO BODY						
	Inspect	X					
	Replace		X				
	Repair			X			
	STAKE RACKS						
	Inspect	X					
	Replace	X					
	Repair			X			
	RACK LOCK ASSEMBLY						
	Inspect	X					
	Replace		X				
	Repair			X			
20	HOIST; WINCHES; POWER CONTROL UNIT POWER TAKEOFF						
2001.1	HOIST OR WINCH ASSEMBLY						
	Inspect	X					
	Replace (assy. including brackets)			X			Brackets welded to truck body.
	Repair		X				
	Replace (handles)	X					
2001.2	BLOCKS, CABLES, SHEAVES						
	SNATCH BLOCK						
	Inspect	X					
	Replace	X					
	Replace (sheave and pin)		X				
	Repair			X			
	CABLES, WINCH						
	Fabricate		X				
22	MISCELLANEOUS BODY, CHASSIS OR HULL AND ACCESSORY ITEMS						
2202	ACCESSORY ITEMS						
	REFLECTORS						
	Inspect	X					
	Replace		X				
2210	DATA PLATES AND INSTRUCTION HOLDERS						
	Replace			X			

Maintenance Allocation Chart—Continued

Functional group	Components and related operation	Echelons of maintenance					Remarks
		1	2	3	4	5	
26	ACCESSORIES, PUBLICATIONS, TEST EQUIPMENT AND TOOLS						
2602.1	ACCESSORIES						
	LADDERS						
	Inspect	X					
	Replace	X					
	Repair		X				

APPENDIX III
BASIC ISSUE ITEMS

1. General

This appendix lists all accessories, tools, and publications issued with, or authorized for the stake body, that are required for 1st echelon operation and maintenance of the equipment.

2. Explanation of Columns

a. Source Codes. Source coding provides data as to the source or method of supply, availability, lowest maintenance echelon authorized to install or capable of manufacturing and, where applicable, recoverability of a repair part. The codes consist of number and letter symbols, and appear in the various sub-columns as follows:

(1) *Technical service.* Numbers in this column indicate the supplying technical service basic number. Those items to be obtained through General Engineer supply channels are indicated by "GE" in the description column. Those code numbers indicated, other than Corps of Engineers, are as follows:

9—Ordnance Corps.
12—Adjutant General.
55—Transportation Corps.

(2) *Source.* The selection status and method of supply are indicated by the following code symbol:

P—applied to repair parts which are high mortality parts; procured by technical services, stocked and supplied from the technical service depot system, and authorized for use at indicated maintenance echelons.

(3) *Maintenance.* The lowest maintenance echelon authorized to install or manufacture the part is indicated by the following code symbol:

O—Organizational Maintenance (1st and 2d echelons).

b. Federal Stock Number. This column lists the 11-digit Federal Stock Number used for requisitioning and stockage purposes. When a Federal Stock Number is not available. the manufacturer's part number preceded by the 5-digit Federal supply code for manufacturers will be listed in the description column to be used for requisitioning purposes.

c. Description. The nomenclature for each part is given in this column. The noun name is to be used for requisitioning purposes. When Federal stock numbers are not available, the 5-digit Federal supply code for manufacturers is listed in parentheses preceding the manufacturer's part number. Example: (90280) B–30698–1.

d. Unit of Issue. Where no abbreviation is shown in this column, the unit of issue is "each."

e. Expendability. Those items classified as nonexpendable are indicated by the letters NX. The column is left blank if the item is expendable.

f. Quantity Authorized. This column contains the quantities of accessories, tools, and publications that are authorized for the item of equipment.

g. Quantity Issued with Equipment. Entries in this column list the actual quantity of accessories, tools, and publications isued with the equipment to the using units. The column is blank when the quantities authorized must be requisitioned through normal supply channels.

h. Illustrations.

(1) *Figure number.* This column contains the figure number which illustrates the item.

(2) *Item number.* This column contains the number of the item shown in the illustration.

Basic Issue Items List

Source codes				Federal stock No.	Description	Unit of issue	Expendability	Quantity authorized	Quantity issued with equipment	Illustration	
Technical service	Source	Maintenance	Recoverability							Figure	Item
					Group 26—ACCESSORIES, PUBLICATIONS, TOOLS AND TEST EQUIPMENT						
					2602.1 ACCESSORIES						
	9	0			HANDLE, WINCH: (90280) B-30698-1.	EA		2	2	9	9
	P	0		2590-377-4877	LADDER, STRAIGHT, UTILITY:	EA		2	2	12	3
55	P	0		3940-247-7606	BLOCK, SNATCH	EA		1	1	8	2
					2602.2 COMMON TOOLS						
	P	0		5120-224-4046	HAMMER, HAND: mach., ball peen, 1¼ lb head (GE).	EA		1			
					2602.4 PUBLICATIONS						
12					TM 5-2510-200-15 DA TECHNICAL MANUAL.	EA		2	2		

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[AG 451.21 (8 May 59)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

Official:

R. V. LEE,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

DCSLOG (1)
ASA (2)
CNGB (1)
Tech Stf, DA (1) except
  CofEngr (15)
Engr Rsch & Dev Lab (3)
USCONARC (3)
Army Maint Bd (1)
USA Arty Bd (2)
USA Armor Bd (2)
USA Inf Bd (2)
USA Air Def Bd (2)
USA Abn & Elct Bd (2)
USA Avn Bd (2)
US ARADCOM (2)
US ARADCOM Rgn (2)
OS Maj Comd (5) except
  USASETAF (2)
Mil Dist (1)
USA Corps (Res) (1)
Sectors, USA Corps (Res) (1)
Armies (2) except
  First US Army (4)
Corps (2)
Div (2)
Engr Brig (1)
Svc Colleges (2)
Br Svc Sch (2) except
  USAES (100)
USMA (2)
Gen Depot (2)
Engr Sec, Gen Depot (10)
Engr Depot (10)
Trans Terminal Comd (2)
Army Terminals (1)
OS Sup Agcy (2)
Div Engr (2)
Engr Fld Maint Shops (2)
Buffalo, Chicago, Detroit, Alaska, Los Angel
  New Orleans, New York, Louisville,
  Pittsburgh, San Francisco, Omaha, Seattle,
  Kansas City, Baltimore, Ft Worth, Eastern
  Ocean, Philadelphia, Rock Island, St Louis
  and St Paul Dist Engr (1)
Engr Cen (5)
AMS (3)
Chicago Proc Ofc (10)
Engr Maint Cen (36)
Engr Sup Con Ofc (10)
Fld Comd, Def Atomic Spt Agcy (8)
JBUSMC (1)
USAREUR ComZ (2)
USAREUR Engr Sup Con Agcy (10)
USAEUR Engr Proc Cen (2)
MAAG (5)
Units org under fol TOE:
  5-15 (2)
  5-16 (2)
  5-48 (2)
  5-138 (2)
  5-157 (5)
  5-125 (2)
  5-218 (2)
  5-225 (2)
  5-226 (2)
  5-262 (5)
  5-267 (1)
  5-278 (5)
  5-279 (2)

NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.

* United States Government Printing Office:1981--341-662/9312

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